TravelMate6500&Aspire9510/9520 Service Guide

Service guide files and updates are available on the AIPG/CSD web; for more information, please refer to http://csd.acer.com.tw

Revision History

Please refer to the table below for the updates made on TravelMate6500 & Aspire9510 service guide.

Date	Chapter	Updates
6/20/2006	CH6	Update FRU list
9/20/2006	CH1	Update Performance for Aspire 9520

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Conventions

The following conventions are used in this manual:

Screen messages	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

- 1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
- 2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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System Specifications

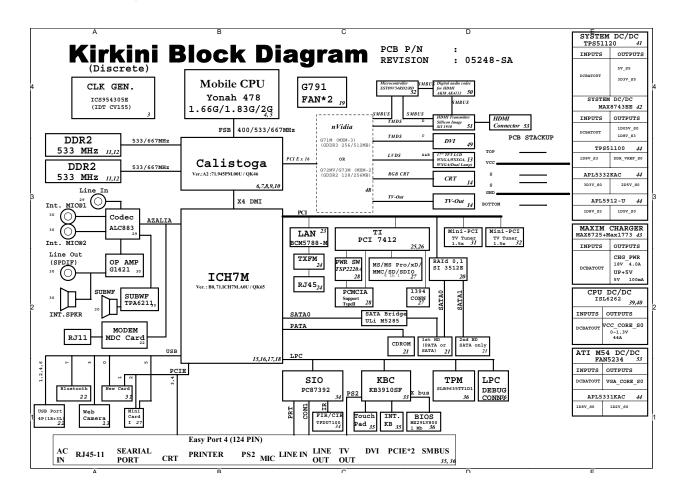
Features

Perfor	nan	ce
Intel®	[®] Cen	trino [®] mobile technology, featuring:
		Intel [®] core [™] Duo processor at 1.66 ~2.16 GHz
		Intel [®] core [™] solo processor at 1.66 GHz
		Intel [®] core [™] 2 Duo processor at 1.66 ~1.83GHz
		Intel [®] core [™] 2 Duo processor at 2 ~2.33 GHz
Core Lo	oaic	
		North Bridge + South Bridge:
	_	□ 945PM + ICH7M
Memor	y	
		DDR2 533/667 SDRAM
		Two soDIMM slots, 128MB to 1GB per slot
		Maxium memory up to 2GB with two 1GB SODIMM
Displa	j	
		17"WXGA TFT LCD, 1440 x 900 pixel resolution , supporting simultaneous multi-window viewing via Acer Gridvista $^{\text{TM}}$
		Nvidia [®] GeForce TM Go 7900 graphics with 512 MB of external GDDR2 VRAM , supporting Microsoft [®] DirectX [®] 9.0, Shader Model 3.0, OpenEXR High Dynamic Range (HDR) technology, Nvidia [®] PowerMizer TM 6.0, PCI Express [®]
		Nvidia [®] GeForce TM Go 7600 graphics with 256 MB of external GDDR2 VRAM, supporting Microsoft [®] DirectX [®] 9.0, Shader Model 3.0, OpenEXR High Dynamic Range (HDR) technology, Nvidia [®] PowerMizer TM 6.0, PCI Express [®]
		Dual independent displays supported
		16.7 million colors
		MPEG-2/DVD hardware-assisted capability
		S-video/TV-out support
		DVI-D with HDCP support
		Acer Arcade feturing Acer CinemaVision and Acer ClearVision technologies
VRAM		
		GDDR2, 400MHz, 8M x 16, 16M x 16, 128/256 MB
		GDDR3, 500/600MHz, 16M x 16, 32M x 16, 256/512 MB
Audio		
		Realtek ALC883DD with Dolby support

		Internal microphone x 2 (Stereo MIC)
		Two speakers (high quality) 12.5cc
		Branded subwoofer (30cc)
		HD Audio codec
		Codec specification requires:
		☐ HD Audio interface
		□ 10 DAC (7.1ch + 2ch); 2 ADC
		□ DAC SNR >= 95dB, ADC SNR >= 85dB
		□ Pin 2 pin with Dolby/DTS logo codec
		□ S/PDIF Out support
		☐ All DACs support 44.1K/48K/96K/192K sample rate
		☐ All ADCs support 44.1K/48K/96K sample rate
		☐ At least 2 GPIOs for customized appllications
Storage	e sub	osystem
		HDD:
		9.5mm height, 2.5" HDD
		☐ Easily removable no more than two screws
		□ 80/100/120/160GB
		□ 5400/7200 rpm
		□ PCI Bus Master Enhanced IDE
		☐ Two HDD SKU
		□S0: SATA HDD
		□S1: 2nd SATA HDD (RAID 0/1 support)
		□P: PATA ODD
		☐ One HDD SKU
		□S0: PATA HDD
		□P: PATA ODD
		Optical drive options:
		☐ 1x HD DVD-ROM drive
		□ 8x slot-load DVD-Super Multi double-layer drive
Commi	ınica	
		Modem: 56Kbps ITU V.92 with PTT approval; Wake-on-Ring support
		LAN: Gigabit Ethernet; Wake-on-LAN support
		WPAN: Bluetooth® 2.0 + EDR (Enhanced Data Rate)
		WLAN: Intel® PRO/Wireless 3945ABG network connection (dual-mode tri-mode 802.11a/b/g) W Fi CERTIFIED TM solution, supporting Acer Acer SignalUp TM wireless technology (for Aspire 9400 TravelMate 5600 series)
		Acer OrbiCam integrated 1.3 megapixel CMOS camera, featuring:
		□ 225-degree ergonomic rotation
		☐ Acer VisageON technology
		☐ Acer PrimaLite technology

I/O Ports	
	1 x HDMI (Aspire series only)
	4 x USB 2.0 ports
	1 x Ethernet (RJ-45) port
	1 x Modem (RJ-11) port
	1 x External VGA port
	1 x Infrared (4 pin)
	1 x CIR
	1 x typell PCMCIA Cardbus slot
	1 x Express card narrow type slot
	1 x 90W DC-in jack for AC adapter
	1 x Line-in jack
	1 x MIC-in jack
	1 x headphones/speakers/line-out jack/SPDIF jack
	1 x S-video port
	1 x Analog cable/DVB-T jack for TV tuner module (mini jack)
	1 x A/V in (7pin)
	1 x DVI-D
	1 x ezDock (TravelMate series only) (or printer port either one)
Power Su	pply
۵	8-cell of Li-lon battery pack 4800mAh Li-lon
	90W 19V 3-pin AC adaptor
Environm	ent
	Temperature
	☐ Operating: 5 °C to 35 °C
	□ Non-operating: -20 °C to 65 °C
	Humidity (non-condensing)
	☐ Operating: 20% to 80%
	□ Non-operating: 20% to 80%
Dimensio	ns and weight
	400 (W) x 297(D) x 33.5~47.2(H) mm
	3.79 kg (8.36 lbs.)

Block Diagram



Aspire 9510 Outlook View

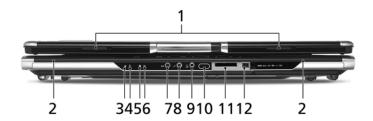
Front Open View



#	Icon	Item	Description
1	N/A	Built-in camera	1.3 megapixel web camera for video communication.
2	N/A	Display screen	Also called Liquid-Crystal Display (LCD), displays computer output.
3	N/A	Status indicators	Light-Emitting Diodes (LEDs) that light up to show the status of the computer's functions and components.
4	5	Wireless communication button	Press to enable/disable Wireless function. Lights to indicate the status of wireless LAN communications.
5	*	Bluetooth communication button	Press to enable/disable Bluetooth function. Lights to indicate the status of Bluetooth communications.
6	18 9	Microphone	Internal microphone for sound recording.
7	N/A	Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
8	N/A	Click buttons (left, center and right)	The left and right buttons function like the left and right mouse buttons; the center button servesw as a four-way scroll butotn.

9	N/A	Arcade/media buttons	For use with Acer Arcade and other media playing programs.
10	N/A	Palmrest	Comfortable support area for your hands when you use the computer.
11	N/A	Keyboard	For entering data into your computer.
12	Ф	Power button	Turns the computer on and off.
13	N/A	Easy-launch buttons	Buttons for launching frequently used programs.

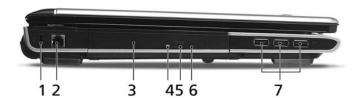
Closed Front View



#	Icon	Item	Description
1	N/A	Latch	Locks and releases the lid.
2	N/A	Speakers	Left and right speakers deliver stereo audio output.
3	Ţ.	Power indicator	Indicates the computer's power status.
4	Ē	Battery indicator	Indicates the computer's battery status.
5	*	Bluetooth communication indicator	Indicates the status of Bluetooth communications.
6	C	Wireless communication indicator	Indicates the status of wireless LAN communications.
7	(+ +)	Line-in jack	Accepts audio line-in devices (e.g., audio CD player, stereo walkman).
8	100	Microphone-in jack	Accepts input from external microphones.
9	SPDIF	Headphones/speaker/ line-out jack with S/PDIF support	Indicates the computer's power status.

10	<	Infrared port	Receives signals from a remote control.
11	PRO PRO SIA	5-in-1 card reader	Accepts Memory Stick(MS), Memory Stick PRO(MS PRO), MultiMediaCard(MMC), Secure Digital(SD) and xD-Picture Card(xD). Note: Only one card can operate at any given time.
12	[1394]	IEEE 1394 port	Connects to IEEE 1394 devices.

Left View



#	Icon	Item	Description
1	ĸ	Kensington lock slot	Connects to a Kensington-compatible computer security lock.
2		Modem(RJ-11) port	Connects to a phone line.
3	N/A	Optical drive	Internal optical drive; accepts CDs or DVDs.
4	N/A	Optical disk access indicator	Lights up when the optical drive is active.
5	N/A	Optical drive eject button	Ejects the optical disk from the drive.
6	N/A	Emergency eject hole	Ejects the optical drive tray when the computer is turned off.
7	● ✓•+	USB 2.0 ports	Connects to USB 2.0 devices.

Right View



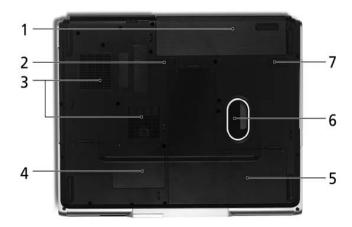
#	Icon	Item	Description
1	N/A	PC Card slot eject button	Ejects the PC Card from the slot.
2		PC Card slot	Accepts one Type II PC Card.
3	ExpressCard/34	ExpressCard/34 slot	Accepts one ExpressCard/34 module.
4	● ✓•+	USB 2.0 ports	Connect to Universal Serial Bus (USB) 2.0 devices (e.g., USB mouse, USB camera).
5	S →	S-video/TV-out(NTSC/ PAL) port	Connects to a television or display device with S-video input.
6		External display(VGA) port	Connects to a display device(e.g., external monitor, LCD projector)
7	N/A	Ventilation slots	Enable the computer to stay cool, even after prolonged use.
8		DC-in jack	Connects to an AC adaptor.

Rear View



#	lcon	Item	Description
1	용	Ethernet (RJ-45) port	Connects to an Ethernet 10/100-based network.
2	HDMI	HDMI port	Support high definition digital video connections.
3	DVI-D	DVI-D port	Supports digital video connections.
4	AV-in	AV-in port	Accepts input signals from audio/visual(AV)devices(for selected models).
5	负	RF-in port	Connects to a PAL/SECAM cable or DVB-T antenna.
6	N/A	Battery	Powers the computer.

Bottom View



#	Item	Description
1	Battery bay	Houses the computer's battery pack.
2	Battery release latch	Releases the battery for removal.
3	Cooling fan	Helps keep the computer cool.
		NOTE: Do not cover or obstruct the opening of the fan.
4	Memory compartment	Houses the computer's main memory.
5	Sub woofer	Emits low frequency sound output.
6	Hard disk bay	Houses the computer's hard disk (secured with screws).
7	Battery lock	Locks the battery in position.

TravelMate 6500 Outlook View

Front Open View



#	Icon	Item	Description
1	N/A	Built-in camera	1.3 megapixel web camera for video communication.
2	N/A	Display screen	Also called Liquid-Crystal Display (LCD), displays computer output.
3	N/A	Status indicators	Light-Emitting Diodes (LEDs) that light up to show the status of the computer's functions and components.
4	C	Wireless communication button	Press to enable/disable Wireless function. Lights to indicate the status of wireless LAN communications.
5	*	Bluetooth communication button	Press to enable/disable Bluetooth function. Lights to indicate the status of Bluetooth communications.
6	Le ss	Microphone	Internal microphone for sound recording.
7	N/A	Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
8	N/A	Click buttons (left, center and right)	The left and right buttons function like the left and right mouse buttons; the center button servesw as a four-way scroll butotn.
9	N/A	Palmrest	Comfortable support area for your hands when you use the computer.

10	N/A	Keyboard	For entering data into your computer.
11	Ф	Power button	Turns the computer on and off.
12	N/A	Easy-launch buttons	Buttons for launching frequently used programs.

Close Front View



#	lcon	Item	Description
1	N/A	Latch	Locks and releases the lid.
2	N/A	Speakers	Left and right speakers deliver stereo audio output.
3	\docume{\psi}	Power indicator	Indicates the computer's power status.
4	Ē	Battery indicator	Indicates the computer's battery status.
5	*	Bluetooth communication indicator	Indicates the status of Bluetooth communications.
6	5	Wireless communication indicator	Indicates the status of wireless LAN communications.
7	(+ +)	Line-in jack	Accepts audio line-in devices (e.g., audio CD player, stereo walkman).
8	100	Microphone-in jack	Accepts input from external microphones.
9	SPDIF	Headphones/speaker/ line-out jack with S/PDIF support	Indicates the computer's power status.
10		Infrared port	Receives signals from a remote control.
11	PRO PRO XD	5-in-1 card reader	Accepts Memory Stick(MS), Memory Stick PRO(MS PRO), MultiMediaCard(MMC), Secure Digital(SD) and xD-Picture Card(xD). Note: Only one card can operate at any given time.

12		IEEE 1394 port	Connects to IEEE 1394 devices.
	1394		

Left View



#	Icon	Item	Description
1	ĸ	Kensington lock slot	Connects to a Kensington-compatible computer security lock.
2		Modem(RJ-11) port	Connects to a phone line.
3	N/A	Optical drive	Internal optical drive; accepts CDs or DVDs.
4	N/A	Optical disk access indicator	Lights up when the optical drive is active.
5	N/A	Optical drive eject button	Ejects the optical disk from the drive.
6	N/A	Emergency eject hole	Ejects the optical drive tray when the computer is turned off.
7	•	USB 2.0 ports	Connects to USB 2.0 devices.

Right View



#	lcon	Item	Description
1	N/A	PC Card slot eject button	Ejects the PC Card from the slot.
2		PC Card slot	Accepts one Type II PC Card.
3	ExpressCard/34	ExpressCard/34 slot	Accepts one ExpressCard/34 module.
4	● ✓•+	USB 2.0 ports	Connect to Universal Serial Bus (USB) 2.0 devices (e.g., USB mouse, USB camera).

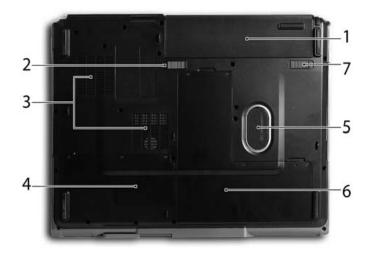
#	lcon	Item	Description
5	S →	S-video/TV-out(NTSC/ PAL) port	Connects to a television or display device with S-video input.
6		External display(VGA) port	Connects to a display device(e.g., external monitor, LCD projector)
7	N/A	Ventilation slots	Enable the computer to stay cool, even after prolonged use.
8		DC-in jack	Connects to an AC adaptor.

Rear View



#	lcon	Item	Description
1	용	Ethernet (RJ-45) port	Connects to an Ethernet 10/100-based network.
2	DVI-D	DVI-D port	Supports digital video connections.
3		124-pin Acer ezDock connector	Connects to Acer ezDock.
4	N/A	Battery	Powers the computer.

Base View



#	Item	Description
1	Battery bay	Houses the computer's battery pack.
2	Battery release latch	Releases the battery for removal.
3	Cooling fan	Helps keep the computer cool.
		NOTE: Do not cover or obstruct the opening of the fan.
4	Memory compartment	Houses the computer's main memory.
5	Sub woofer	Emits low frequency sound output.
6	Hard disk bay	Houses the computer's hard disk (secured with screws).
7	Battery lock	Locks the battery in position.

Indicators

Your computer has seven easy-to-read status indicators, including four on the front panel.



The front panel indicators are visible when the computer cover is closed up..

lcon	Item	Description
>	HDD	Indicates when the hard disk drive is active.
A	Caps Lock activity	Lights up when Caps Lock is activated.
1	Num Lock activity	Lights up when Num Lock is activated.
Ş	Power	Indicates the status of computer's power status.
=	Battery	Indicates the computer's battery status.
*	Bluetooth	Indicates the status of Bluetooth communication.
<i>C</i>	Wireless LAN	Indicates the status of wireless LAN communication.

Easy-Launch Buttons

Located above the keyboard are four buttons. They are mail, Web browser, Empowering Key and one user-programmable button.



Item	Default Application
e	Acer Empowering Technology (User-programmable)
\boxtimes	Email application (User-programmable)
B.	Internet browser (User -programmable)
Р	User programmable

Touchpad

The build-in touchpad is a pointing device that senses movement on its surface.

This means the cursor responds as you move your finger across the surface of the touchpad.

The touchpad is located in the middle of the palm rest area, providing maximum comfort and efficiency.

Touchpad Basics



- ☐ Move your finger across the touchpad(2) to move the cursor.
- Press the left (1) and right (4) buttons located beneath the touchpad to perform selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchpad is the same as clicking the left button
- ☐ Use the 4-way scroll (3) button to scroll up or down and move left or right a page. This button mimics your cursor pressing on the right scroll bar of windows applications.

Function	Left Button(1)	Righ Button(4)	Main touchpad(2)	Center button(3)
Execute	Quickly click twice		Tap twice (at the same speed as double-clicking the mouse button)	
Select	Click once		Tap once	
Drag	Click and hold. Then slide your finger across the touchpad to drag the cursor over the selection.		Tap twice quickly; rest your finger on the touchpad on the second tap and drag the cursor.	
Access context menu		Click once		
Scroll				CLick and hold to move up/down/left/ right

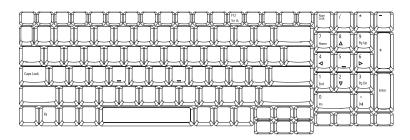
NOTE: When using the touchpad, keep it-and your fingers-dry and clean. The touchpad is sensitive to finger movement; hence, the lighter the touch, the better the response. Tapping harder will not increase the touchpad's responsiveness.

Using the Keyboard

The full-sized keyboard includes an embedded numeric keypad, separate cursor keys, two Windows keys and twelve function keys.

Lock keys and Embedded Numeric Keypad

The keyboard has four lock keys which you can toggle on and off.



The computer features three lock keys, each with its own status indicator light.

Lock Key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters are typed in uppercase. Toggle on and off by pressing the Caps Lock key on the left side of the keyboard.
Num lock <fn+f11></fn+f11>	When Num Lock is on, the embedded keyboard is in numeric mode. The keys function as a calculator(complete with the arithmetic operators+,-,*, and /). Use this mode when you need to do a lot of numeric data entry. When Num Lock is off, the keys assume cursor and other shortcut functions.
Scroll lock <fn+f12></fn+f12>	When Scroll Lock is on, the screen moves one line up or down when you press the up or down arrow keys respectively. Scroll Lock does not work with some applications.

The embedded numeric keypad functions like a desktop numeric keypad. It is indicated by small characters located on the upper right corner of the keycaps. To simplify the keyboard legend, cursor-control key symbols are not printed on the keys.

Desired access	Num Lock on	Num Lock off
Numer keys on embedded keypad	Type numbers in a normal manner	
Cursor-control keys on embedded keypad	Hold <shift> while using cursor- control keys.</shift>	Hold <fn> while using cursor-control keys.</fn>
Main keyboard keys	Hold <fn> while typing letters on embedded keypad.</fn>	Type the letters in a normal manner.

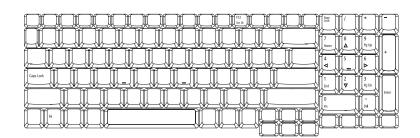
Windows Keys

The keyboard has two keys that perform Windows-specific functoins.

Windows logo key	Pressed alone, this key has the same effect as clicking on the Windows Start button; it launches the Start menu. It can also be used with other keys to provide a variety of functions:	
	+ Tab (Activates the next Taskbar button)	
	+ E (Opens the My Computer window)	
	+ F1 (opens Help and Support)	
	+F (opens the Search Results window)	
	+ M (minimizes all windows)	
	<shift> +</shift>	
	+ R (opens the Run dialog box)	
Application key	This key has the same effect as clicking the right mouse button; it opens the application's context menu.	

Hotkeys

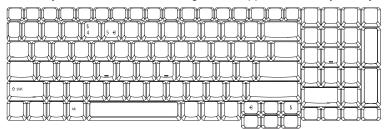
The computer employs hotkeys or key combinations to access most of the computer's controls like screen brightness, volume output and the BIOS utility. To activate hotkeys, press and hold the <Fn> key before pressing the other key in the hotkey combination.



Hot Key	lcon	Item	Description
Fn+F1	?	Hot key help	This key will cause a help message to appear on the display device that describes the definition and functionality of the unit hot keys.
Fn+F2	©	Acer eSettings	Launches the Acer eSetting in Acer Empowering Technology. See "Acer Empowering Technology"
Fn+F3	⊗	Acer ePower Management	Launches the Acer ePower Management in Acer Empowering Technology. See "Acer Empowering Technology"
Fn+F4	z²	Sleep	Puts the computer in Sleep mode
Fn+F5		Display toggle	Switches display output between the display screen, external monitor(if connected)and both .
Fn+F6		Screen blank	Turns the display screen backlight off to save power. Press any key to return
Fn+F7		Touchpad toggle	Turns the internal touchpad on and off
Fn+F8	⊄/ ∢ »	Speaker toggle	Turns the speakers on and off
Fn+ 	(1)	Volume up	Increases the sound volume
Fn+ 	()	Volume down	Decreases the sound volume
Fn+- →	÷	Brightness up	Increases the screen brightness
Fn+ ∢	. ₩-	Brightness down	Decrease the screen brightness

Special Keys

You can locate the Euro symbol and the US dollar sign at the upper-center of your keyboard.



The Euro Symbol

- 1. Open a text editor or word processor.
- 2. Either press < € > at the bottom-right of the keyboard, or hold <Alt Gr> and then press the <5> key at the upper-center of the keyboard.

NOTE: Some fonts and software do not support the Euro symbol. Please refer to www.microsoft.com/typography/faq/faq12.htm for more information.

The US Dollar Sign

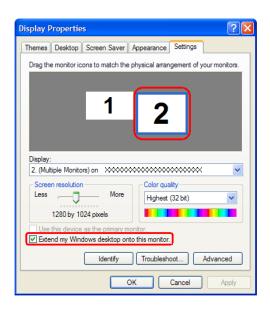
- 1. Open a text editor or word processor.
- 2. Either press < \$_ > at the bottom-right of the keyboard, or hold **<Shift>** and then press the **<4>** key at the upper-center of the keyboard.

NOTE: This function varies according to the language settings.

Using the System Utilities

Acer GridVista(dual-display compatible)

To enable the dual monitor feature of your notebook, first ensure that the second monitor is connected, then, select **Start**, **Control Panel**, **Display** and click on **Settings**. Select the secondary monitor (2) icon in the display box and then click the check box Extend my Windows desktop onto this monitor. Finally, click **Apply** to confirm the new settings and click **OK** to complete the process.



Acer GridVista is a handy utility that offers four pre-defined display settings so you can view multiple windows on the same screen. To access this function, please go to **Start, All Programs** and click on **Acer GridVista**. You may choose any one of the four display settings indicated below:

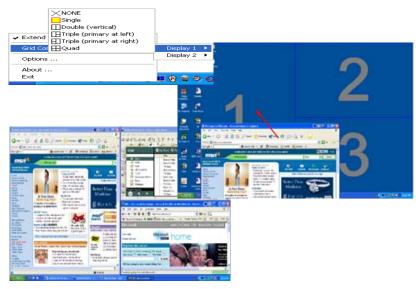


Double(vertical), Triple(primary at left), Triple(primary at right), or Quad Acer Gridvista is dual-display compatible, allowing two displays to be partitioned independently.

Acer Gridvista is dual-display compatible, allowing two displays to be partitioned independently.

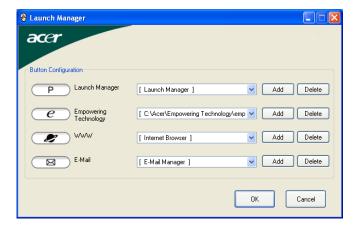
AcerGridVista is imple to set up:

- 1. Run Acer GridVista and select your preferred screen configuration for each display from the task bar.
- 2. Drag and drop each window into the appropriate grid.
- 3. Enjoy the convenience of a well-organized desktop.



NOTE: Please ensure that the resolution setting of the second monitor is set to the manufacturer's recommended value.

Launch Manager



Launch Manager allows you to set the four easy-launch buttons located above rhw keyboard. You can access the Launch Manager by clicking on **Start, All Programs**, and then **Launch Manager** to start the application.

Norton AntiVirus

Norton AntiVirus is an anti-virus software that finds and repairs infected files, and protects against viruses to keep your computer data safe and secure.

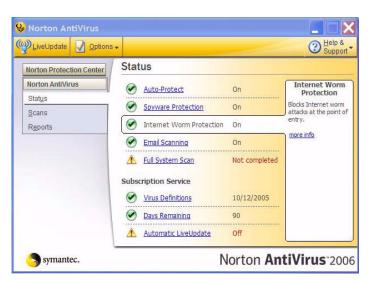
How do I check for viruses?

A Full System Scan scans all files on your computer. To perform a system scan:

1. Start Norton AntiVirus.

Double click on the **Norton AntiVirus** icon on the desktop or click on the **Start** menu in the Windows taskbar, highlight **Programs**, and select **Norton AntiVirus**.

2. In the Norton AntiVirus main window, click Scan for Viruses.



- 3. In the Scan for Viruses panel, click Scan My Computer.
- 4. Under Actions, click Scan.
- 5. When the scan is complete, a scan summary appears. Click Finished.

You can schedule customized virus scans that run unattended on specific dates and times or at periodic intervals. If you are using the computer when the scheduled scan begins, it runs in the background so that you do not have to stop working.

For more information refer to the Norton Antivirus Help menu.

Acer Empowering Technology

Acer's innovative Empowering Technology makes it easy for you to access frequently used functions and manage your new Acer notebook. It features the following handy utilities:

	Acer eNet Management hooks up to location-based networks intelligently.
	Acer ePower Management extends battery power via versatile usage profiles.
	Acer ePresentation Management connects to a projector and adjusts display settings conveniently.
	Acer eDataSecurity Management protects data with passwords and advanced encryption algorithms.
	Acer eLock Management limits access to external storage media.
	Acer eRecovery Management backs up and recovers data flexibly, reliably and completely.
	Acer eSettings Management accesses system information and adjusts settings easily.
П	Acer ePerformance Management improves system performance by optimizing disk space, memory an



For more information, press the < < < < key to launch the Empowering Technology menu, then click on the appropriate utility and select the Help or Tutorial function.

Empowering Technology Password

Before using Acer eLock Management and Acer eRecovery Management, you must initalize the Empowering Technology password. Right-click on the Empowering Technology toolbard and select "Password Setup" to do so. If you do not initialize the Empowering Technology password, you will be prompted to do so when running Acer eLock Management or Acer eRecovery Management for the first time.

Acer eNet Management

registry settings.

Acer eNet Management helps you to quickly and easily connect to both wired and wireless networks in a variety of locations. To access this utility, either click on the "Acer eNet Management" icon on your netebook, or start the program from the Start menu. You also have the option to set Acer eNet Management to start automatically when you boot up your PC.

Acer eNet Management automatically detects the best settings for a new location, while offering you the freedom to manually adjust the settings to match your needs.



Acer eNet Management can save network settings for a location to a profile, and automatically switch to the appropriate profile when you move from one location to another. Settings stored include network connection settings (IP and DNS settings, wireless AP details, etc.), as well as default printer settings.

Security and safety concerns mean that Acer eNet Management does not store username and password information.



Acer ePower Management



Acer ePower Management features a straightforward user interface. To launch it, select Acer ePower Management from the Empowering Technology interface.

AC Mode (Adapter mode)

The default setting is "Maximum Performance." You can adjust CPU speed, LCD brightness and other settings, or click on buttons to turn the following functions on/off: Wireless LAN, Bluetooth, CardBus, FireWire (1394), Wired LAN and Optical Device if supported.

DC Mode (Battery mode)

There are four pre-defined profiles - Entertainment, Presentation, Word Processing, and Battery Life. You can also define up to three of your own.

To create new power profile

- 1. Change power settings as desired.
- 2. Click "Save as..." to save to a new power profile.
- 3. Name the newly created profile.
- 4. Select whether this profile is for Adapter or Battery mode, then click OK.

5. The new profile will appear in the profile list.

Battery status

For real-time battery life estimates based on current usage, referto the panel on the lower left-hand side of the window.



For additional options, click "Settings" to:

- Set alarms.
- □ Re-load factory defaults.
- Select what actions will be taken when the cover is closed or the power button is pressed.
- View information about Acer ePower Management.



Acer ePresentation Management

Acer ePresentation Management lets you project your computer's display to an external device or project using the hot key: Fn + F5. If auto-detection hardware is implemented in the system, your system display will be automatically switched out when an external display is connected to the system.



Acer eDataSecurity Management

Acer eDataSecurity Management is handy file encryption utility that protexts your files from being accessed by unauthorized persons. It is conveniently integrated with Windows explorer as a shell extension for quick and easy data encryption/decryption and also supports on-the-fly file encryption for MSN Messager and Microsoft Outlook.

The Acer eDataSecurity Management setup wizard will prompt you for a suvervisor password and default encryption. This encryption will be used to encrypt files by default, or you can choose to enter your won file-specific password when encrypting a file.

NOTE: The password used encrypt a file is the unique key that the system needs to decrypt it. If you lose the password, the supervisor password is the only other key capable of decrypting the file. If you lose both passwords, there will be no way to decrypt your encryped file! **Be sure to safeguard all related passwords!**





Acer eLock Management

Acer eLock Management is a security utility that allows you to lock your removable data, optical and floppy drives to ensure that data can't be stolen while your notebook is unattended.

Removable data devices - includes USB disk drives, USB pen drives, USB flash drives, USB MP3 drives,

USB memory card readers, IEEE 1394 disk drives and any other removable disk drives that can be mounted as a file system when plugged into the system.

- Optical drive deivces includes any kind of CD-ROM or DVD-ROM drives.
- ☐ Floppy disk drives 3.5-inch disks only.
- ☐ Interfaces includes serial ports, parallel port, infrared (IR), and Bletooth.

To activate Acer eLock Management, a password must be set first. Once set, you can apply locks to any of the devices. Lock(s) will immediately be set without any reboot necessary, and will remain locked after rebooting, until unlocked.

NOTE: If you lose your password, there is no method to reset it except by reformatting your notebook or taking your notebook to anAcer Customer Serivce Center. Be sure to remember or write down your password.



Acer eRecovery Management

Acer eRecovery Management is a powerful utility that does away with the need for recovery disks provided by the manufacturer. The Acer eRecovery Management utility occupies space in a hidden partition on your system's HDD. User-created backups are stored on D:\ drive. Acer eRecovery Management provides you with:

- Password protection.
- Recovery of applications and drivers.
- Image/data backup:
 - Back up to HDD (set recovery point).

- □ Back up to CD/DVD.Image/data recovery tools:□ Recover from a hidden partition (fa
 - Recover from a hidden partition (factory defaults).
 - Recover from the HDD (most recent user-defined recovery point).
 - Recover from CD/DVD.



For more information, please refer to "Acer eRecovery Management"

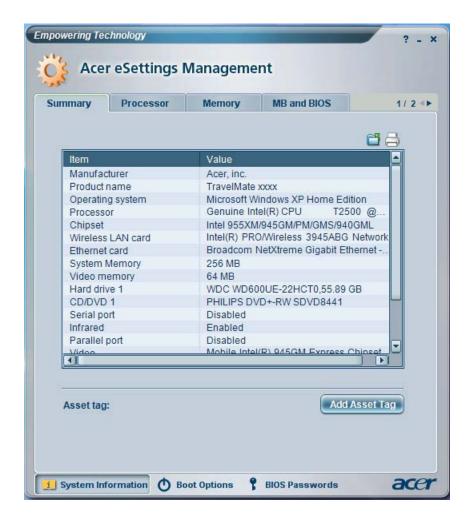
NOTE: If your computer did not come with a Recovery CD or System CD, please use Acer eRecovery Management's "System backup to optical disk" feature to burn a backup image to CD or DVD. To ensure the best results when recovering your system using a CD or Acer eRecovery Management, detach all peripherals (except the external Acer ODD, if your computer has one), including your Acer ezDock.

Acer eSettings Management

Acer eSettings Management allows you to inspect hardware specifications and to monitor the system health status. Furthermore, Acer eSettings Management enables you to optimize your Windows operating system, so your computer runs faster, smoother and better.

Acer eSettings Management also:

- Provides a simple graphical user interface for navigating.
- Displays general system status and advanced monitoring for power users.



Acer ePerformance Management

Acer ePerformance Management is a system optimization tool that boosts the performance of your Acer notebook. It provides and express optimization method to release unused memory and disk space quickly. The user can also enable advanced options for full control over the following option:

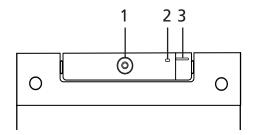
- ☐ Memory optimization releases unused memory and check usage.
- ☐ Disk optimization removes unneeded items and files.
- Speed optimization improves the usability and performance of your Windows XP system.



Acer OrbiCam

The Acer OrbiCam is a 1.3 megapixel CMOS camera appropriately mounted on the top of the LCD panel. The camera's 225-degree ergonomic rotation allows you to capture high-resolution photos or videos up front or at the back of the LCD panel. The Acer OrbiCam fully supports the Acer Video Conference technology so that you can transmit the best video quality over an instant Messenger service.

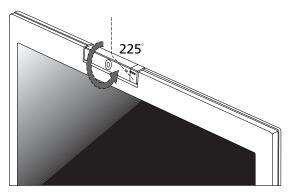
Getting to know your Acer OrbiCam



No.	Item
1	Lens
2	Power indicator
3	Rubber grip (selected models only)

Rotating the Acer OrbiCam

The Acer OrbiCam rotates 225 degrees counterclockwise to achieve the desired angle. Refer to the illustrations below:



For your convenience, the camera snaps 45 degrees to match the position of your face in front or at the back of the LCD panel.

NOTE: Do not rotate the camera clockwise to prevent damage to the device.

Launching the Acer OrbiCam

To launch the Acer OrbiCam, double click on the Acer OrbiCam icon on the screen.

OR

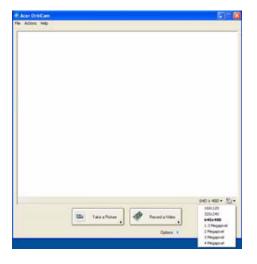
Click Start > All programs > Acer > Acer OrbiCam. The Acer OrbiCam capture windows window appears.



Changing the Acer OrbiCam settings

Resolution

To change the capture resolution, click the displayed resolution at the bottom right corner of the capture window, then select the desired resolution.



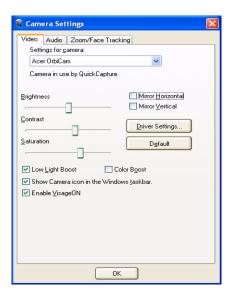
Options

Click Options to display the Window, Preview, and Folder tabs. Use the options to change the capture window size, preview settings, and the folder for captured photos or videos.

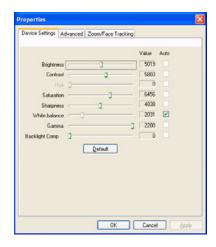


Camera Settings

Basic settings: Click the Camera Settings icon on the bottom right corner of the capture display, then select Camera Settings from the pop-up menu. You can adjust the Video, Audio, and Zoom/ Face tracking options from this window.



□ Capture settings: From the Camera Settings window, click the Driver Settings button. The Properties window will appear.



- Device Settings allows you to change the camera brightness, contrast, hue, saturation, sharpness, etc.
- Advanced Settings allows you to achieve gain control, implement image mirror, select image enhancements and anti-flicker settings, and turn on/off the camera indicator.
- Zoom/Face Track Settings allows you to adjust the zoom level and turn the face tracking feature on or off.

Capturing photos or videos

To capture a photo or a video clip, rotate the Acer OrbiCam to get the desired angle, then click the Take a Picture or Record a Video button. The Windows Picture and Fax Viewer or the Windows Media Player automatically launches to display or play a preview of the photo/video clip.

NOTE: By default, all photos and videos are saved in the My Pictures and My Videos folder.

Using the Acer OrbiCam as webcam

The Acer OrbiCam is automatically selected as the capture device of any instant messenger (IM) application. To use the Acer OrbiCam as a webcam, open the IM service, then select the video/webcam feature. You can now broadcast from your location to an IM partner anywhere in the world.

Enabling the Acer VisageON

The Acer VisageON technology comes with two features: Face tracking and Video effects (selected models only). The Face Tracking feature tracks your head movement and automatically centers your face in the capture window. The video effects feature allows you to select and apply an effect to your video transmissions.

NOTE: The face tracking feature is not capable of centering your face beyond the capture window frame. Minimal head movements are tracked more efficiently.

To enable the Acer VisageON:

1. Right click on this icon, then select VisageON from the pop-up menu.



The VisageON window appears as below:



2. Select and apply a video effect in the left section of the VisageON window. Change the face tracking settings and options in the right section.

Using the face tracking feature

To use the face tracking feature:

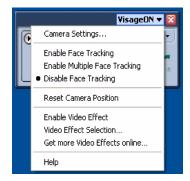
1. Click the left icon down arrow button, then select Single User or Multiple Users from the pop-up menu. For multiple users, the face tracking feature automatically centers all the users' face in the capture window, otherwise the utility centers the face of the user closest to the camera.



2. Click the right icon to zoom in/out or reset the current view.



3. Click VisageON to display a menu that allows to change the configuration of the camera, face tracking and video effects settings.



Using video effects (selected models only)

The Video Settings section allows you to select an avatar or accessory video effect from the list. To select an effect:

 Click the encircled icon to display the available video effects. The Video Effect Selection window appears as below.



Click on a video effect to use. The selected effect appears in the video effects section of the VisageON window.



NOTE: When using avatars, you may have to calibrate the face points to achieve better tracking. Follow screen instructions in the VisageON to continue.

NOTE: You may use video effects when using the camera for IM chat/video sessions or call conferences.

${\it Hardware Specifications \ and \ Configurations}$

Processor

Item	Specification
CPU type	Intel® Core Duo processor T2300/T2300E/T2400/T2500/T2600,
	Intel® Core Solo processor T1300
	Intel [®] Core TM 2 Duo processor T5500/T5600 (2MB L2 cache, 1.66/1.83 GHz, 667 MHz FSB)
	Intel [®] Core TM 2 Duo processor T7200/T7400/T7600(4MB L2 cache, 2/2.16/ 2.33 GHz, 667 MHz FSB)
CPU package	Micro-FCPGA /Micro-FCBGA
CPU core voltage	Depend on DVI
CPU I/O voltage	1.05V typical
L2 cache	2MB

CPU Fan True Value Table

Stage	DTS(degree C)	Local	Fan Speed(rpm)	Acoustic Level(dBA)
1	2910	50	56	29
2	3320	60	60	32
3	3720	70	65	25
4	4170	82	70	38
5	4430	93	77	40

System Board Major Chips

Item	Controller
System core logic	Intel® 945PM + ICH7M
Super I/O controller	ICH7M LPC interface
Audio controller	Azalia Audio Controller ALC883DD
Video controller	Nvidia G72MV/G71M/G73M
Hard disk drive controller	ICH7M
Keyboard controller	KB3910SF
DVI controller	Nvidia G72MV/G71M/G73M
PCMCIA controller	PCI 7412
DDR-soDIMM controller	945PM

BIOS

Item	Specification
BIOS vendor	Phoenix
BIOS Version	Phoenix First BIOS
BIOS ROM type	1MB CMOS Boot Block Flash Memory
BIOS ROM size	1MB
BIOS package	40 pin TSOP
BIOS password control	Set by setup manual

System Memory

Item	Specification
Memory controller	945PML
Memory size	256MB/512MB/1G
DIMM socket number	2
Supports memory size per slot	1024 MB
Supports maximum memory size	2GB (with dual soDIMM modules)
Supports DIMM type	DDRII SDRAM Standard
Supports DIMM Speed	533/667 MHz
Supports DIMM voltage	1.8V
Memory module combinations	You can install memory modules in any combinations as long as they match the above specifications.

LAN Interface

Item	Specification
Supports LAN protocol	10/100/1000Mbps PCI LAN
LAN chip	Broadcom 5788
LAN connector type	RJ45
Feature	Support WOL from S5, support jumbo frame, file deployment

Wireless LAN

Item	Specification
Card Type	Mini card (Manufacturing option)
Mode	802.11 a/b/g(Intel 3945ABG) 802.11 b/g (Intel 3945BG)
Antenna	Built in 2 antenna(Has to be placed on the top of LCD on the sides of LCD latch, the wire of antenna can't be placed under the panel) New Web Pifa type
Support	Wi-Fi, WPA2, WMM, CCX V3/V4

Modem Interface

Item	Specification
Data modem data baud rate (bps)	56K ITU
Supports modem protocol	V.90/V.92, WWDAA Apply CISPR22 Wake-on-Ring ready
Modem connector type	RJ11

VGA

Notice		Discrete	
Chipset for suitable VGA type	Nvidia G72MV	Nvidia G71M	Nvidia G73M
Video RAM	128/256MB	128/256/512MB	256/512MB

USB Port

Item	Specification
USB compliancy level	2.0
OHCI	USB 2.0
Number of USB port	4
Location	Left Side *3 Right Side *1

Audio Port

Item	Specification
Audio Controller	Azalia Audio Controller (Realtek ALC883)
Audio onboard or optional	Built-in
Mono or Stereo	Stereo
Resolution	High-performance DACs with 95dB SNR, ADCs 85 dB SNR
Compatibility	Microsoft PC99/2100, AC97 2.3 & WHQL/WLP2.0
Mixed sound source	CD
Sampling rate	All DACs support 44.1K/48K/96K/192K sample rate All ADCs support 44.1K/48K/96K sample rate
Internal microphone	one internal microphone(2 digital picrophone array)
Internal speaker / Quantity	Yes / 2(at least 12.5cc for each)
Support	S/PDIF

PCMCIA Port

Item	Specification
PCMCIA controller	PCI7412
Supports card type	PC card 95 supported with Type II
Number of slots	One
Access location	Right Side
Supports 32 bit CardBus	Yes

Keyboard

Item	Specification	
Keyboard controller	KB3910SF	
Keyboard vendor & model name	New Acer Ergo keyboard	
Total number of keypads	☐ 105/106 keys standard keyboard	
Touchpad with 4-way integrated scroll button	Yes	

Keyboard

Item	Specification
Feature	Support Windows keys and application keys
	☐ Standard pitch, 2.5 mm travel length
	☐ Hotkey controls
	embedded numberic keypad
	☐ Multi-Langue support
	☐ Spill-proof
Four easy-launch buttons	☐ Internet browser
	email with LED
	☐ Acer Empowering
	 one user-programmable button

Battery

Item	Specification	
Vendor & model name	Sanyo/Simplo	
Battery Type	Li-ion	
Number of battery cell	8-cell 4800mAh	
Pac	kage configuration	
Pin 1	BATT+: Battery+, Battery Positive Terminal	
Pin 2		
Pin 3	ID : Identify Pin (Note 1)	
Pin 4	B/I : Battery-In Pin	
Pin 5	TS : Connect to Thermister	
Pin 6	SMD : SMBus data interface I/O pin	
Pin 7	SMC : SMBus clock interface I/O pin	
Pin 8	GND : Battery Negative Terminal	
Pin 9		

17.1" LCD Panel

Item	Specification			
Vendor & model name	AUO B170PW03 V3 AUO B170PW03 V4	QDI QD17TL02-06	CMO N170C1-L02	LG LP171WP4-TL02
Screen Diagonal (mm)	17.1" WXGA	17.1" WXGA	17.1" WXGA	17.1" WXGA
Active Area (mm)	367.20(W)x229.50(H)	367.20(W)x229.50(H)	367.20(W)x229.50 (H)	367.20(W)x232.90 (H)
Display resolution (pixels)	1440x3(RGB)x900	1440x3(RGB)x900	1440x3(RGB)x900	1440x3(RGB)x900
Pixel Pitch(mm)	0.255(per one triad)x0.255	0.255(per one triad)x0.255	0.255(H)x0.255(V)	0.255(per one triad)x0.255
Pixel Arrangement	RGB vertical stripe	RGB vertical stripe	RGB vertical stripe	RGB vertical stripe
Display Mode	Normally white	Normally white	Normally white	Normally white
Surface Treatment	non-glare type(V3) glare type(V4)	Hard coating(3H) glare type	Hard coating(2H), glare type	glare type

17.1" LCD Panel

Item	Specification			
Typical White Luminance (cd/m²) also called Brightness	200(Typical)	200(Center Typical)	400(Typical)	200(Typical)
Contrast Ratio	300 :1(Typical)	300:1(Min)	550(Typical)	350(Min)
Response Time (Optical Rise Time+Fall Time)msec	16(Typical)	25(Typical)	16(Typical) 26(Max)	25(Typical)
Normal Input Voltage of Power Supply	+3.3V(Typical)	+3.3V(Typical)	+3.3V(Typical)	+3.3V(Typical)
Power Consumption (watt)	8(Max)	4.7(Typical)	4.320(Max)	4.78(Typ)
Weight	700g(Max)	750g	950(Typical)	670(Typical)
Physical Size(mm)	382.2(W)x244.5(H)x 6.6(D) (Max)	382.7(H)x245.1(V)x 7.0(T)Max	382.7(H)x247.3(V) x10~8.6(T)Max	382.2(W)x244.5(H)x6.5(D) (Max)
Electrical Interface	2 channel LVDS	2 channel LVDS	3.3V LVDS	2 channel LVDS
Support Color	Native 262K colours	Native 262K colours	Native 262K colours	Native 262K colours
Viewing Angle (typ.) Horizontal: Right/Left Vertial: Upper/Lower	45/45 20/35	45/45 15/35	70/70 60/60	45/45 15/35
Temperature Range(°C) Operating Storage (shipping)	0 to +50 -20 to +60	0 to +50 -25 to +60	0 to +50 -20 to +60	0 to +50 -20 to +60

ACAdapter

ltem	Specification
Vendor & model name	LITEON-90W, PA-1900-04 WR BLACK 1.7X5.5X11
Input Requirements	·
Maximum input current (A, @100Vac, full load)	1.6A @100Vac input and maximum load
Nominal(Rated) frequency (Hz)	50 or 60 and single phase
Frequency variation range (Hz)	47 - 63
Nominal voltages (Vrms)	100-127(low range) 200-240(high range)
Efficiency	High efficiency 83% minimum, full load, warm-up condition.
Output Ratings (CV mode)	
Rated output voltage	Offers rated output voltage 19.0V
Voltage Range	18.05V to 19.95V
Noise + Ripple	380mV
Rated Power	65Watts continuously at all specified conditions
Output current	0 A (min.) to 4.74A (max.)
Dynamic Output Characterist	ics
Start-up time	Shall less than 5 sec
Hold up time	at least 5ms (@115 Vac input, full load)

Item	Specification
Over Voltage Protection (OVP)	29V
Over Current Protection(OCP)	Output current limit is 5A(Max mode)
Short circuit protection	Output can be shorted without damage, and auto recovery
Electrostatic discharge (ESD)	15kV (at air discharge) 8kV (at contact discharge)
Dielectric Withstand Voltage	
Primary to secondary	2150VDC for 1 sec
Leakage current	less than 100uA
Regulatory Requirements	1. CISPR 22 Class B 2. VCCI Class II

Hard Disk Drive Interface

Item		Specification	
Vendor & Model Name	Segate SATAST98823AS/ HGST SATA 1.5G NCQ MORAGA+HTS541080G9SA 00	Segate SATA ST9100824AS LF/ HGST NCQMORAGA+HTS541010 G9SA00	Segate SATA ST9120821AS LF/ Toshiba SATAI1.5G W/ NCQ MK1234GSX
Capacity (MB)	80000	100000	120000
Bytes per sector	1024/512	512	512
Data heads	3/4	4	4
Drive Format			
Disks	2	2	2
Spindle speed (RPM)	5400 RPM	5400 RPM	5400 RPM
Performance	Specifications		
Buffer size	8192KB	8192KB	8192KB
Interface	Serial ATA	Serial ATA	Serial ATA
Max. media transfer rate (disk-buffer, Mbytes/s)	57.6/61.6	57.6/61.6	59.3
Data transfer rate (host~buffer, Mbytes/s)	150 MB/Sec. SATA 1.0	150 MB/Sec.	150 MB/Sec.
DC Power Requirements			
Voltage tolerance	5V(DC) +/- 5%	5V(DC) +/- 5%	5V(DC) +/- 5%

Item	Specification		
Vendor & Model Name	Segate ST960812A	Segate ST980829A	Segate ST9100825A
Capacity (MB)	60000	80000	100000
Bytes per sector	512	512	512
Data heads	2	3	4
Drive Format			
Disks	1	2	2
Spindle speed (RPM)	4200 RPM	4200 RPM	4200 RPM
Performance	Specifications		
Buffer size	8184KB	8184KB	8184KB
Interface	Parallel ATA	Parallel ATA	Parallel ATA
Max. media transfer rate (disk-buffer, Mbytes/s)	56.25	56.25	56.25
Data transfer rate (host~buffer, Mbytes/s)	100 MB/Sec.(Ultra DMA Mode 5)	100 MB/Sec.(Ultra DMA Mode 5)	100 MB/Sec.(Ultra DMA Mode 5)
DC Power Requirements			
Voltage tolerance	5V(DC) +/- 5%	5V(DC) +/- 5%	5V(DC) +/- 5%

24X Combo Drive Interface

Item	Specification		
Vendor & model name	PHILIPS SCB5265	LITEON SSC-2485K	
Performance Specification			
Transfer rate (KB/sec)	Sustained: DVD:Max 10.56Mbytes/sec CD: 3600Kbytes/sec	Sustained: DVD:Min 10.15Mbytes/sec CD: 3500 Kbytes/sec	
Access Time(Typical)	DVD: Random Access: 125 ms DVD:Full Stroke: 165ms CD:Random Access:105ms CD:Full Stroke:160ms	DVD: Random Access: 100 ms DVD:Full Stroke: 190ms CD:Random Access:95ms CD:Full Stroke:180ms	
Buffer Memory	2MB	2MB	
Interface	Compliant to ATA/ATAPI-5	ATA/ATAPI-6, MMC-3 and SFF8090 Ver5, Revision 1.2.	

24X Combo Drive Interface

Item	Specification		
Applicable disc format	DVD(read):DVD 5, 9, 10, 18, DVD-ROM, DVD-Video, DVD-R 3.95G, DVD-R 4.7G, DVD-RW, DVD+R, DVD+RW, Multi-Border DVD-R/DVD-RW, Multi-Session DVD+R, DVD+RW, DVD-RAM CD(write): CD-DA, CD ROM Mode-1, CD-ROM/XA Mode-2 Form-1 and Mode-2 Form-2, CD-I, Video-CD(MPEG-1), CD-Text CD(write): CD-DA, CD-ROM Mode-1, CD-ROM/XA Mode-2 Form-1 and Mode-2, CD-I, Video-CD, CD-Text	CD: CD-DA, CD-ROM Mode-1, CD-ROM XA Mode-2 Form-1 and Form-2, CD-I Ready, Viceo-CD(MPEG-1), Karaoke- CD, PhotoCD(MultiSession), Enhance CD, CD extra, I-Trax CD and UDF	
Loading mechanism	Load: Manual load	Manual load/DC brushless motor system	
Power Requirement	Max. 1300mA	Max. 1200mA	
Input Voltage	5 V +/- 5 % (Operating)	5 V +/- 5 % (Operating)	

8X Super Multi Interface

Item	Specific		
Vendor & model name	Pioneer DVR-K06RS	oneer DVR-K06RS Panasonic UJ-845 F	
Performance Specification			
Transfer rate (KB/ sec)	Sustained: DVD:Min 10.80Mbytes/ sec CD: 3600Kbytes/sec	Sustained: DVD:Min 10.5Mbytes/ sec CD: 3600 Kbytes/sec	Sustained: DVD:Max 10.56Mbytes/ sec CD: 3600 Kbytes/sec
Access Time(Typical)	DVD: Random Access: 160 ms DVD:Full Stroke: 300ms CD:Random Access:150ms CD:Full Stroke:290ms	DVD: Random Access: 180 ms DVD:Full Stroke: 360ms CD:Random Access:150ms CD:Full Stroke:270ms	DVD: Random Access: 200 ms DVD:Full Stroke: 450ms CD:Random Access:130ms CD:Full Stroke:240ms
Buffer Memory	2MB	2MB	2MB
Interface	Compliant to ATA/ATAPI- 6, MMC-4 and SFF8090 Ver5	ATA/ATAPI-6, MMC-3 and SFF8090, SFF8020	ATA/ATAPI-5

8X Super Multi Interface

Item	Specifi		
Applicable disc format	CDExtra(CD PLUS), Video CD, CD text data, CD-R discs, CD-RW discs, DVD-ROM, DVD-R Ver2.0, DVD-RDL Ver3.0, DVD-RW Ver1.0&1.1&1.2, DVD+R Ver1.0&1.11&1.2, DVD+R DLVer1.0, DVD+RW Ver1.1&1.2, DVD+RW high speed Ver1.0, DVD-RAM Ver2.0&2.1&2.2	CD-DA, CD ROM Mode-1, CD-ROM/XA Mode-2 Form-1 and Mode-2 Form-2, CD-I, Video-CD(MPEG-1), CD-Text, PhotoCD, Enhance CD, CD extra, I-Trax CD and UDF DVD-ROM, DVD-Video, DVD-Audio, DVD-R single/multi border, DVD+R single/multi session, DVD-RW, DVD+RW, DVD+RW, DVD-RAM	DVD-ROM(DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+R DL, DVD-RAM, CD-DA, CD-ROM/XA, CD-i, Karaoke CD, Video CD, Multisession Photo CD, Enhanced CD, i-trax CD, CD extra, CD Plus, CD-Text, CD-R and CD-RW
Loading mechanism	Load: Manual load	Manual load	Motorized Tray-type loading
Power Requirement	Max. 1800mA	Max. 2100mA	Max. 1300mA
Input Voltage	5 V +/- 5 % (Operating)	5 V +/- 5 % (Operating)	5 V +/- 5 % (Operating)

Power Management

ACPI Mode	Power Management
Mech. Off (G3)	All devices in the system are turned off completely.
Soft Off (G2/S5)	OS initiated shutdown. All devices in the system are turned off completely.
Working (G0/S0)	Individual devices such as the CPU and hard disk may be power managed in this state.
Sleeping State (S3)	CPU Power Down VGA Power Down PCMCIA Suspend Audio Power Down Hard Disk Power Down Super I/O Power Down
Sleeping State (S4)	Also called Hibernate state. System saves all system states and data onto the disk prior to power off the whole system.

Dimensions and Weight

Item	Details		
Model	Aspire 1690	Aspire 3510	
Deminsions	400mm(W) x 297mm(D) x 33.5~47.2mm(H)		
Weight	3.79Kg		

${\it Environmental \, Requirements}$

Item	Specification
Temperature	

Environmental Requirements

Item	Specification		
Operating	+5 ~ +35°C		
Non-operating	-20 ~ +65°C (storage package)		
Humidity			
Operating	20% ~ 80% without condensation		
Altitude	Operating sea level 0 to 10,000ft		
	Storage sea level 0 to 40,000ft		

System Utilities

BIOS Setup Utility

The BIOS Setup Utility is a hardware configuration program built into your computer's BIOS (Basic Input/Output System).

Your computer is already properly configured and optimized, and you do not need to run this utility. However, if you encounter configuration problems, you may need to run Setup. Please also refer to Chapter 4 Troubleshooting when problem arises.

To activate the BIOS Utility, press **m** during POST (when "Press <F2> to enter Setup" message is prompted on the bottom of screen).

The setup screen displays BIOS as follows: Navigating the BIOS Utility

Function	Item	
Information	Display the system informations	
Main	Allows the user to specify standard IBM PC AT system parameters	
Advanced	Provides advanced settings of the system	
Security	Provides security settings of the system	
Boot	Allows the user to specify the boot options	
Exit	Allows the user to save CMOS setting and exit Setup	

During setup, all Fn function keys and power saving functions are disabled.

There are five menu options: Main, Advanced, Security, Boot and Exit.

Follow these instructions:

To choose a menu, use the cursor left/right keys (zx).
To choose a parameter, use the cursor up/down keys (wy).
To change the value of a parameter, press p or q.
Press ^ while you are in any of the menu options to go to the Exit menu.
In any menu, you can load default settings by pressing $t. \ \mbox{You}$ can also press u to save any
changes made and exit the BIOS Setup Utility.

NOTE: You can change the value of a parameter if it is enclosed in square brackets. Navigation keys for a particular menu are shown on the bottom of the screen. Help for parameters are found in the Item Specific Help part of the screen. Read this carefully when making changes to parameter values.

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Information

PhoenixBIOS Setup Utility Info. Main Advanced Security Boot Exit

CPU Type: Genuine Intel(R) CPU T2500@2.00GHz

CPU Speed 2000 MHz

SCSI HDD0 Model Name: TOSHICA MK1032GSX

SCSI HDD0 Serial Number: 16GI0681T

SCSI HDD1 Model Name: TOSHICA MK1032GSX

SCSI HDD0 Serial Number: 16GI0680T

ATAPI Model Name: MATSHITADVD-RAM JU-845S-(SM)

System BIOS Version: V0.014 VGA BIOS Version: 5.73.22.15.51

KBC Version:08.10

Serial Number: S2ACB0500261901DBB2000

Asset Tag Number: None Product Name: Aspire 9510 Manufacturer Name: Acer

UUID: 8d6be460-e2b7-11da-be42-86345298c92d

F1 Help	↑↓ Select Item	F5/F6 Change Values	F9 Setup Defaults
Esc Exit	← → Select Menu	Enter Select ▶ Sub-Menu	F10 Save and Exit

Parameter	Description	
CPU Type	This item will show the CPU information of the system.	
CPU Speed	This item will show the CPU clock speed.	
IDE1 Model Name	This item will show the Model name of HDD installed on Primary IDE master. The hard disk model name is automatically detected by the system. If there is no hard disk present or unknown type, "None" should be shown on this field	
IDE1 Serial Number	This item will show the Serial number of HDD installed on Primary IDE master. If no Hard disk or other devices are installed on Primary IDE master, then it will display a blank line	
System BIOS Version	This field reports the BIOS version of system	
VGA BIOS Version	This field reports the VGA version of the system	
KBC Version	This field reports the keyboard controller version of the system	
Serial Number	This item will show the Serial number of system.	
Asset Tag Number	This item will show the Asset Tag number of the system.	
Product Name	This field will show product name.	
Manufacturer Name	This field will show manufacturer name.	
UUID	This will be visible only when there is an internal LAN device present.	

Main

This menu provides you the information of the system.

PhoenixBIOS Setup Utility							
Info.	Main	Advance	ed	Secur	ity	Boot	Exit
						_	
						Item S	pecific Help
System Time:		[11:59:38]					
System Date:		[05/16/2006]				<tab>, <</tab>	Shift-Tab>, or
						<enter> s</enter>	selects field.
System Memory:		640 KB					
Extended Memory	/ :	1022 KB					
Video Memory		256 MB					
Quiet Boot:		[Enabled]					
Power on Display:		[Auto]					
Network boot		[Enabled]					
F12 Boot Menu:		[Disabled]					
D2D Recovery:		[Enabled]					
B2B Recovery.		[Endoied]					
F1 Help 1	`↓ Sel	ect Item	F5/F6	Change	e Values		F9 Setup Defaults
Esc Exit ←	→ Sel	ect Menu	Enter	Select	▶ Sub-N	/lenu	F10 Save and Exit

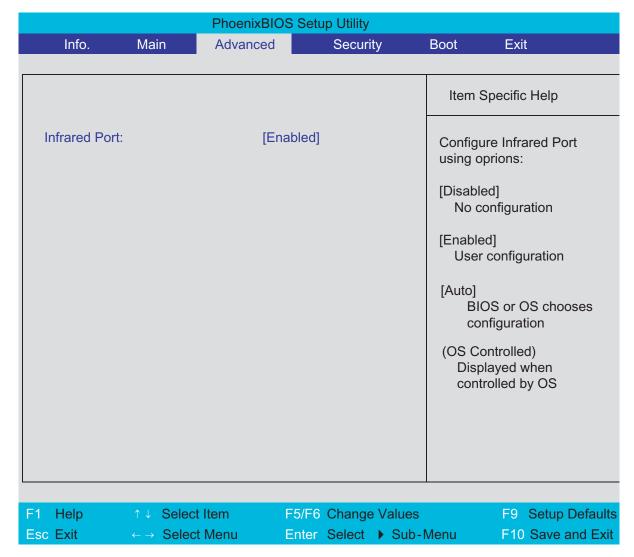
Parameter	Description	
System Time / System Date	The hours are displayed with 24 hours format. The values set in these two fields take effect immediately.	
System Memory	This field reports the memory size of system base memory. The size is fixed to 640KB.	
Extended Memory	This field reports the memory size of the extended memory in the system.	
	Extended Memory size = Total memory size - 1 MB	
Video Memory	VGA Memory size = 128MB	
Quiet Boot	Customer Logo display will be shown during POST when it is selected.	
Power on display	Auto: During power on process, the system will detect if any display	
	device is connected on external video port. If any external display device is connected, the power on display will be in CRT (or projector) only mode. Otherwise it will be in LCD only mode.	
	Both : Simultaneously enable both the integrated LCD screen and the system's external video port (for an external CRT or projector).	
Network boot	When this is selected, Boot from LAN feature is enabled. When this is not selected, Boot from LAN feature is then disabled.	

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Parameter	Description
F12 Boot Menu	When this is selected, users can modify device boot priority by pressing F12 key during POST. When this is not selected, device boot priority will not be adjustable during POST.
D2D Recovery	Allow user to enable/disable the Disk-to-Disk recovery

Advanced

The Advanced menu screen contains parameters involving your hardware devices. It also provides advanced settings of the system.



The table below describes the parameters in the screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description	Options
Infrared Port	Enables, disables or auto detects the Infrared port.	Auto/Enabled/Disabled

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Security

The Security screen contains parameters that help safeguard and protect your computer from unauthorized use.

PhoenixBIOS Setup Utility					
Info.	Main	Advanced	Security	Boot	Exit
Supervisor Pass User Password		Clear Clear		Item	Specific Help
Set Supervisor I Set User Passo		[Enter]			sor Password accesses of the itility.
Password on Bo	oot:	[Disabled]			
F1 Help Esc Exit	↑↓ Select ←→ Select		6 Change \ r Select ▶	/alues Sub-Menu	F9 Setup Defaults F10 Save and Exit

The table below describes the parameters in this screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description	Option
Supervisor Password Is	N/A	N/A
User Password Is	N/A	N/A
HDD Password Is	N/A	N/A
Set Supervisor Password	Press Enter to set the administrator	Length No more than 8
Set User Password	password. When set, this password protects the BIOS Setup Utility from unauthorized access. [Set]: System password is set [Clear]: System password is not set	characters Characters 0-9, A-Z (not case sensitive)

Parameter	Description	Option
Set HDD Password	When shown as [Locked], the hard drive password currently can not be changed or disabled.	Enter
	To change or disable it, turn off the system and enter Setup immediately after turning it back on. Press [Enter] to input change, or disable hard drive password.	
Password on boot	Defines whether a password is required or not while the events defined in this group happened. The following suboptions are all requires the Supervisor password for changes and should be grayed out if the user password was used to enter setup. Allows the user to specify whether or not a password is required to boot.	Disabled Enabled

Set Supervisor/User Password

If password on boot is required, the password must be set otherwise it cannot be enabled.

The formats of the password are as follows:

Length No more than 8 characters

Characters 0-9,A-Z (not case sensitive)

While these fields are highlighted and press "Enter", a window similar to the following is shown:

Set SupervisorPass	sword	
Enter New Password	[]
Confirm New Password	[]

If there is an old password then setup will prompt with the following window instead and a current password will be required to be entered at first:

Set Supervisor Password	d	
Enter current password	[]
Enter New Password	[]
Confirm New Password	[]

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User can now type password in field "Enter New Password", and re-enter password in field "Confirm New Password" for verification.

If the verification is OK:

The password setting is complete after user presses enter.

Setup Notice

Changes have been saved.

[continue]

If the current password entered does not match the actual current password:

Setup Warning

Invalid password

Re-enter Password

[continue]

If the new password and confirm new password strings do not match:

Setup Warning

Password do not match

Re-enter Password

Boot

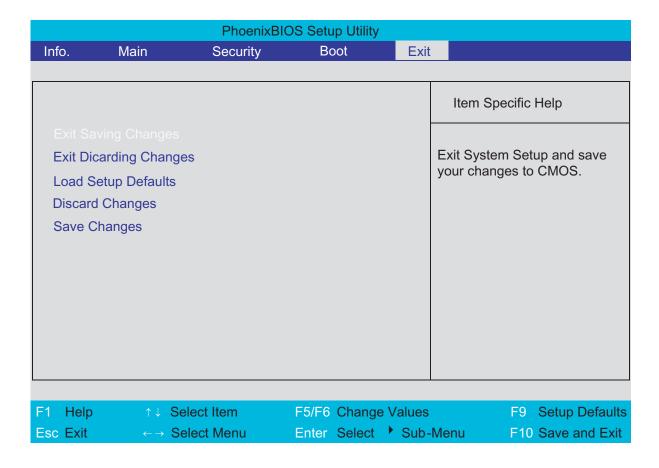
This menu allows the user to decide the order of boot devices to load the operating system. Bootable devices includes the distette drive in module bay, the onboard hard disk drive and the CD-ROM in module bay and onboard LAN device.

PhoenixBIOS Setup Utility						
Info.	Main	Advanced	l Sec	urity	Boot	Exit
Boot priority of 1: USB KEY: 2: USB FDC: 3: USB HDD 4: IDE 0: 6: PCI SCSI 7: PCI LAN:	: ST9100824 <i>F</i>				Keys use configure Up and I select a configure configure to the device of the device configure the device configur	<-> moves ce up or down. <r> specifies ce fixed or cle. ude or include ce to boot. 1> enables or a device. Loads default</r>
F1 Help Esc Exit	↑↓ Select←→ Select		F5/F6 Char Enter Sele			F9 Setup Defaults F10 Save and Exit

Parameter	Description
Boot priority order	Keys used to view or configure devices: Up and Down arrows select a device. <+> and <-> movew the device up or down. <f> and <r> specifies the device fixed or removable.</r></f>
	>
	<x> exclude or include the device to boot.</x>
	<shift +1=""> enables or disables a device.</shift>
	<1-4> Loads default boot sequence.

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Exit



The table below describes the parameters in this screen.

Parameter	Description
Exit Saving Changes	Exit System Setup and save your changes to CMOS
Exit Discarding Changes	Exit utility without saving Setup data to CMOS
Load Setup Default	Load default values for all SETUP items
Discard Changes	Load previous values from CMOS for all SETUP items
Save Changes	Save Setup Data to CMOS

Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble the notebook computer for maintenance and troubleshooting.

To disassemble the computer, you need the following tools:

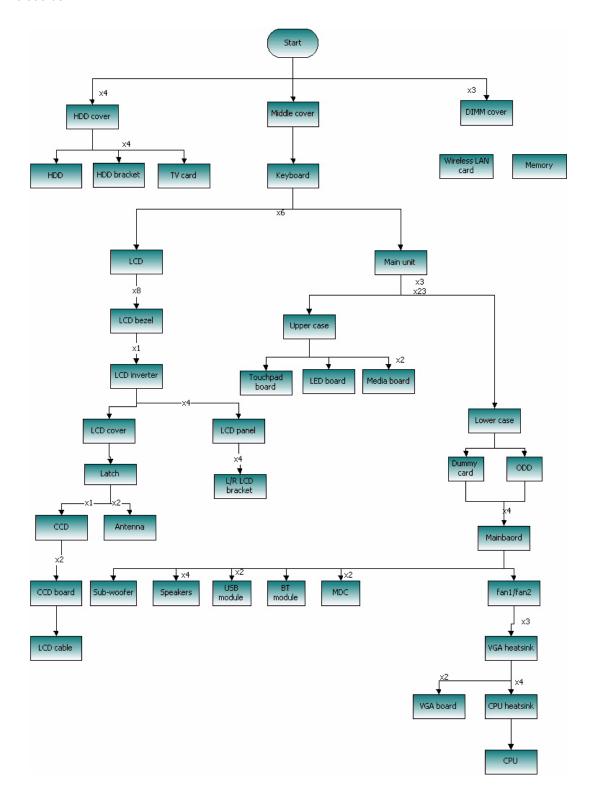
☐ Small Philips screw driver	ectrostatic discharge
☐ Philips screwdriver	
☐ Plastic flat head screw driver	
☐ Tweezers	

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components. When you remove the stripe cover, please be careful not to scrape the cover.

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Disassembly Procedure Flowchart

The flowchart on the succeeding page gives you a graphic representation on the entire disassembly sequence and instructs you on the components that need to be removed during servicing. For example, if you want to remove the main board, you must first remove the keyboard, then disassemble the inside assembly frame in that order.



General Information

Before You Begin

Before proceeding with the disassembly procedure, make sure that you do the following:

- 1. Turn off the power to the system and all peripherals.
- 2. Unplug the AC adapter and all power and signal cables from the system.



3. Remove the battery pack.

NOTE: This product uses mylar or tape to fasten the FFC/FPC/connectors/cable, you may need to tear the tape or mylar before you disconnect different FFC/FPC/connectors.

NOTE: There are several types of screws used to secure bottom case and upper case assembly. The screws vary in length. Please refer the picture below, group the same type of screws together during service disassembling. Please also remember the screw location for each screw type. If you fasten the screw to the wrong location, the screw may be too long to damage the main board.

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Removing the Battery Pack

- 1. Release the battery lock.
- 2. Slide the battery latch.
- 3. Remove the battery pack.





Main Unit Disassembly

Removing the Wireless Card and Memory

- 1. Remove the three screws securing the DIMM cover.
- 2. Remove the DIMM cover.







- 3. Disconnect the wireless antenna.
- 4. Remove the two screws securing the wireless card.
- 5. Remove the wireless card.









- 6. Press the left and right latch to pop up the DIMM2.
- 7. Remove the DIMM2.

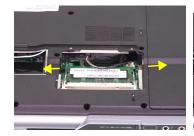




8. Press the left and right latch to pop up the DIMM1.

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9. Remove the DIMM1.





Removing the HDD

- 1. Remove the four screws securing the HDD cover.
- 2. Remove the HDD cover.







- 3. Remove the four screws securing the 1st and 2nd HDD.
- 4. Remove the 2nd HDD.







5. Remove the 1st HDD.





Removing the TV C ard

- 1. Disconnect the TV card antenna.
- 2. Disconnect the TV card connector.

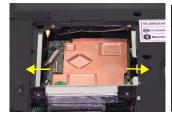






3. Press the left and right latch to pop up the TV card.

4. Remove the TV card.





Separate the LCD Module

- 1. Press the middle cover hinge upward.
- 2. Open the LCD.







3. Remove the middle cover as shown.





- 4. Release the four keyboard latch and turn the keyboard over.
- **5.** Disconnect the keyboard FFC from the mainboard.
- 6. Remove the keyboard.









- 7. Disconnec the LCD cable from the mainboard.
- 8. Pull the wireless antenna out as shown.







9. Remove the two screws securing the LCD hinge on the top.

10. Remove the two screws securing the LCD hinge on the rear.





- 11. Remove the right and left rubber foot and remove the two screws securing the LCD hinge on the bottom.
- 12. Remove the LCD module from the main unit.





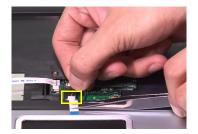


Separate the Upper and Lower Case

- 1. Disconnect the LED FFC.
- 2. Disconnect the touchpad FFC.
- 3. Disconnect the microphone cable.







- 4. Disconnect the media FFC from the mainboard.
- 5. Disconnect the lid switch cable from the mainboard.







6. Remove the three screws securing the upper case.



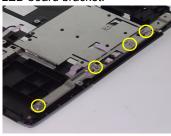
- 7. Remove the 23 screws securing the lower case.
- 8. Separate the upper and lower case.

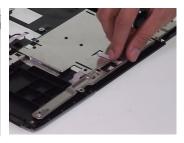




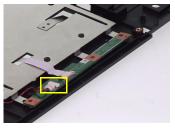
Disassemble the Upper Case

- 1. Remove the four screws securing the LED board bracket.
- 2. Remove the LED board bracket.

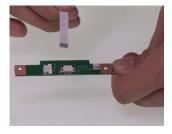




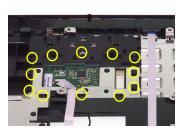
- 3. Disconnect the internal microphone connector.
- 4. Remove the LED board.
- 5. Disconnect the LED FFC from the LED board.







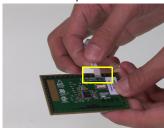
- **6.** Release the 12 latches of the touchpad bracket.
- 7. Remove the touchpad bracket.
- 8. Remove the touchpad board.







9. Disconnect the touchpad FFC from the touchpad board.

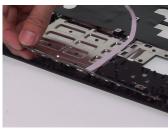


10. Open the isolation tape and remove the two screws securing the media board.





- 11. Remove the media board from the upper case.
- 12. Disconnect the media FFC from the media board.





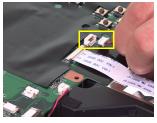
Disassemble the Lower Case

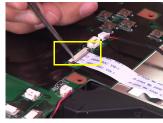
1. Remove the ODD from the main unit.





- 2. Disconnect the bluetooth cable from the mainboard.
- 3. Disconnect the USB FFC from the mainboard.
- Disconnect the subwoofer connector from the mainboard.





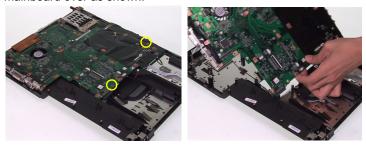


5. Disconnect the speaker cable from the mainboard.

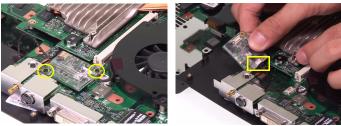


6. Remove the two screws securing the mainboard.

7. Turn the mainboard over as shown.



- 8. Remove the two screws securing the modem board.
- 9. Lift up the modem board, turn it over, and disconnect the modem cable from the modem board.

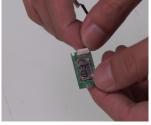


10. Remove the mainboard from the lower case.



11. Remove the bluetooth module from the lower case and disconnect the bluetooth cable from the bluetooth module.





- 12. Remove the two screws securing the USB module.
- 13. Remove the USB module from the lower case.
- 14. Disconnect the USB FFC from the USB module.





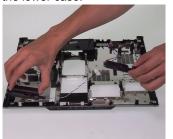


15. Remove the subwoofer from the lower case.



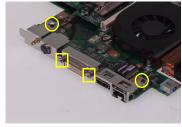
- 16. Remove the four screws securing the left and right speakers.
- 17. Remove the left and right speakers.
- 18. Remove the RJ11 connector from the lower case.







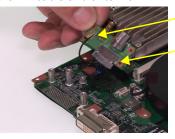
- 19. Remove the two screws and the two hex screws securing the I/O bracket.
- 20. Remove the I/O bracket from the mainboard.





- 21. Remove the two screws securing the TV&RF board.
- 22. Turn the TV&RF board over and disconnect the TV cable and antenna.





TV cable

Antenna

- 23. Remove the two screws securing the fan1.
- 24. Disconnect the fan1 connector from the mainboard and remove the fan1.







- 25. Remove the two screws securing the fan2.
- 26. Disconnect the fan2 connector from the mainboard and remove the fan2.





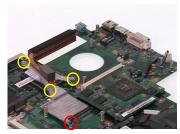


- 27. Release the three attached screws securing the VGA heatsink.
- 28. Remove the VGA heatsink.



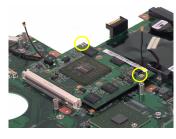


- **29.** Remove the three attached screws and remove the screw securing the CPU heatsink.
- 30. Remove the CPU heatsink.





- **31.** Remove the two screws securing the VGA card.
- 32. Remove the VGA card.





- 33. Remove the screw securing the VGA bracket.
- 34. Remove the VGA bracket.





35. Turn the screw counterclockwise with a flat screw driver to release the CPU.

36. Remove the CPU as shown.





37. Remove the TV cable.





LCD Disassembly

- 1. Remove the eight LCD screw pads.
- 2. Remove the eight screws securing the LCD bezel.



3. Remove the LCD bezel.

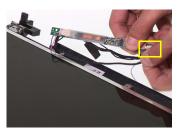




- 4. Remove the screw securing the inverter board.
- 5. Turn the inverter board over, disconnect the LVDS cable and LCD cable from the inverter board.
- 6. Remove the inverter board.







- 7. Remove the four screws securing the LCD panel and LCD hinge.
- 8. Lift up the LCD panel, tear off the tape on the LCD cable and disconnect the LCD cable.
- 9. Remove the LCD panel.

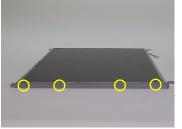






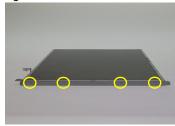
10. Remove the four screws securing the left LCD bracket.

11. Remove the left LCD bracket.





- 12. Remove the four screws securing the right LCD bracket.
- 13. Remove the right LCD bracket.





14. Release the spring and remove the left and the right latches from the LCD cover.

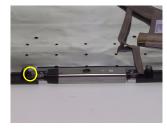






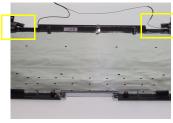


- **15.** Remove the screw securing the CCD module.
- 16. Remove the CCD module from the LCD cover.





- 17. Remove the left and right LCD hinge.
- 18. Remove the two screws securing the antenna bracket.
- 19. Remove the antenna from the LCD cover.







CCD Module Disassembly

- 1. Pull out the CAS from the CCD module.
- 2. Remove the CCD holder from the CCD module.









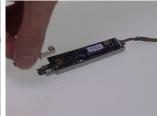
3. Open the CCD module as shown.





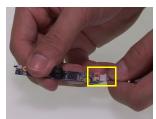
- **4.** Remove the two screws securing the CCD board.
- 5. Remove the CCD hinge.





- 6. Remove the CCD board.
- 7. Disconnect the CCD cable from the CCD board.





HDD Disassembly

- 1. Remove the four screws securing the 2nd HDD bracket.
- 2. Remove the 2nd HDD bracket.





- 3. Remove the four screws securing the 1st HDD bracket.
- **4.** Remove the 1st HDD bracket.





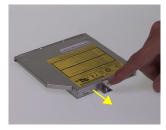
ODD Disassembly

- 1. Remove the ODD bezel from the ODD module.
- 2. Remove the two screws securing ODD bracket.





3. Remove the ODD bracket from the ODD module.



Troubleshooting

Use the following procedure as a guide for computer problems.

NOTE: The diagnostic tests are intended to test this model. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

- 1. Duplicate symptom and obtain the failing symptoms in as much detail as possible.
- **2.** Distinguish symptom. Verify the symptoms by attempting to re-create the failure by running the diagnostic test or by repeating the same operation.
- 3. Disassemble and assemble the unit without any power sources.
- **4.** If any problem occurs, you can perform visual inspection before you fellow this chapter's instructions. You can check the following:
 - power cords are properly connected and secured;
 - there are no obvious shorts or opens;
 - there are no obviously burned or heated components;
 - all components appear normal.
- **5.** Use the following table with the verified symptom to determine which page to go to.

Symptoms (Verified)	Go То
Power failure. (The power indicator does not go on or stay on.)	"Power System Check" on page 84.
POST does not complete. No beep or error codes are indicated.	"Power-On Self-Test (POST) Error Message" on page 86 "Undetermined Problems" on page 98
POST detects an error and displayed messages on screen.	"Error Message List" on page 87
Other symptoms (i.e. LCD display problems or others).	"Power-On Self-Test (POST) Error Message" on page 86
Symptoms cannot be re-created (intermittent problems).	Use the customer-reported symptoms and go to "Power-On Self-Test (POST) Error Message" on page 86
	"Intermittent Problems" on page 97 "Undetermined Problems" on page 98

System Check Procedures

External Diskette Drive Check

If an error occurs with the internal diskette drive, reconnect the diskette connector on the system board.

If the error still remains:

- Reconnect the external diskette drive/DVD-ROM module.
- 2. Replace the external diskette drive/CD-ROM module.
- 3. Replace the main board.

External CD-ROM Drive Check

Do the following to isolate the problem to a controller, drive, or CD-ROM. Make sure that the CD-ROM does not have any label attached to it. The label can cause damage to the drive or can cause the drive to fail.

Do the following to select the test device:

- 1. Boot from the diagnostics diskette and start the diagnostics program.
- See if CD-ROM Test is passed when the program runs to CD-ROM Test.
- **3.** Follow the instructions in the message window.

If an error occurs, reconnect the connector on the System board. If the error still remains:

- 1. Reconnect the external diskette drive/CD-ROM module.
- 2. Replace the external diskette drive/CD-ROM module.
- 3. Replace the main board.

Keyboard or Auxiliary Input Device Check

Remove the external keyboard if the internal keyboard is to be tested.

If the internal keyboard does not work or an unexpected character appears, make sure that the flexible cable extending from the keyboard is correctly seated in the connector on the system board.

If the keyboard cable connection is correct, run the Keyboard Test.

If the tests detect a keyboard problem, do the following one at a time to correct the problem. Do not replace a non-defective FRU:

- 1. Reconnect the keyboard cables.
- 2. Replace the keyboard.
- 3. Replace the main board.

The following auxiliary input devices are supported by this computer:

- Numeric keypad
- External keyboard

If any of these devices do not work, reconnect the cable connector and repeat the failing operation.

Memory check

Memory errors might stop system operations, show error messages on the screen, or hang the system.

- 1. Boot from the diagnostics diskette and start the doagmpstotics program (please refer to main board.
- 2. Go to the diagnostic memory in the test items.
- 3. Press F2 in the test items.
- **4.** Follow the instructions in the message window.

NOTE: Make sure that the DIMM is fully installed into the connector. A loose connection can cause an error.

Power System Check

To verify the symptom of the problem, power on the computer using each of the following power sources:

- 1. Remove the battery pack.
- 2. Connect the power adapter and check that power is supplied.
- **3.** Disconnect the power adapter and install the charged battery pack; then check that power is supplied by the battery pack.

If you suspect a power problem, see the appropriate power supply check in the following list:

☐ "Check the Battery Pack" on page 85

Check the Battery Pack

To check the battery pack, do the following:

From Software:

- 1. Check out the Power Management in control Panel
- In Power Meter, confirm that if the parameters shown in the screen for Current Power Source and Total Battery Power Remaining are correct.
- 3. Repeat the steps 1 and 2, for both battery and adapter.
- 4. This helps you identify first the problem is on recharging or discharging.

From Hardware:

- 1. Power off the computer.
- 2. Remove the battery pack and measure the voltage between battery terminals 1(+) and 6(ground). See the following figure
- **3.** If the voltage is still less than 7.5 Vdc after recharging, replace the battery.

To check the battery charge operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

If the battery status indicator does not light up, remove the battery pack and let it return to room temperature. Re-install the battery pack.

If the charge indicator still does not light up, replace the battery pack. If the charge indicator still does not light up, replace the DC/DC charger board.

Touchpad check

If the touchpad doesn't work, do the following actions one at a time to correct the problem. Do not replace a non-defective FRU:

- 1. After rebooting, run Tracking Pad PS2 Mode Driver. For example, run Syn touch driver.
- 2. Run utility with the PS/2 mouse function and check if the mouse is working.
- 3. If the PS/2 mouse does not work, then check if the main board to switch board FPC is connected O.K.
- **4.** If the main board to switch board FPC is connected well, then check if the FCC on touch pad PCB connects properly.
- 5. If the FFC on touch pad PCB connects properly, then check if LS851 JP1 Pin6=5V are pulese. If yes, then replace switch board. If no, then go to next step.
- 6. Replace touch pad PCB.
- 7. If the touch pad still does not work, then replace FPC on Track Pad PCB.

After you use the touchpad, the pointer drifts on the screen for a short time. This self-acting pointer movement can occur when a slight, steady pressure is applied to the touchpad pointer. This symptom is not a hardware problem. No service actions are necessary if the pointer movement stops in a short period of time.

Power-On Self-Test (POST) Error Message

The POST error message index lists the error message and their possible causes. The most likely cause is listed first.

NOTE: Perform the FRU replacement or actions in the sequence shown in FRU/Action column, if the FRU replacement does not solve the problem, put the original part back in the computer. Do not replace a non-defective FRU.

This index can also help you determine the next possible FRU to be replaced when servicing a computer.

If the symptom is not listed, see "Undetermined Problems" on page 98.

The following lists the error messages that the BIOS displays on the screen and the error symptoms classified by function.

NOTE: Most of the error messages occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured.

NOTE: If the system fails after you make changes in the BIOS Setup Utility menus, reset the computer, enter Setup and install Setup defaults or correct the error.

Index of Error Messages

Error Message List

Error Messages	FRU/Action in Sequence
Struck Key	See "Keyboard or Auxiliary Input Device Check" on page 83
System CMOS checksum bad - Default configuration used	RTC battery Run BIOS Setup Utility to reconfigure system, then reboot system.
Real time clock error	RTC battery Run BIOS Setup Utility to reconfigure system time, then reboot system. Main board
Previous boot incomplete - Default configuration used	"Load Default Settings" in BIOS Setup Utility. RTC battery Main baord
Invalid System Configuration Data	"Load Default Settings" in BIOS Setup Utility. Main board
Operating system not found	Enter Setup and see if fixed disk and drive A are properly identified. Dikette drive Hard disk drive Main board

Error Message List

No beep Error Messages	FRU/Action in Sequence
Power-on indicator turns off and LCD is blank.	Power source (battery pack and power adapter.) See "Power System Check" on page 84
	Ensure every connector is connected tightly and correctly.
	Reconnect the DIMM.
	Main board.
Power-on indicator turns on and LCD is blank.	Power source (battery pack and power adapter.) See "Power System Check" on page 84
	Reconnect the LCD connector
	Hard disk drive
	LCD cable
	LCD inverter
	LCD
	Main board
Power-on indicator turns on and LCD is blank.	Reconnect the LCD connectors.
But you can see POST on an external CRT.	LCD cable
	LCD inverter
	LCD
	Main board
Power-on indicator turns on and a blinking cursor	Ensure every connector is connected tightly and correctly.
shown on LCD during POST.	Main board

Phoenix BIOS Beep Codes

Code	Beeps	POST Routine Description
02h		Verify Real Mode
03h		Disable Non-Maskable Interrupt (NMI)
04h		Get CPU type
06h		Initialize system hardware
07h		Disable shadow and execute code from the ROM.
08h		Initialize chipset with initial POST values
09h		Set IN POST flag
0Ah		Initialize CPU registers
0Bh		Enable CPU cache
0Ch		Initialize caches to initial POST values
0Eh		Initialize I/O component
0Fh		Initialize the local bus IDE
10h		Initialize Power Management
11h		Load alternate registers with initial POST values
12h		Restore CPU control word during warm boot
13h		Initialize PCI Bus Mastering devices
14h		Initialize keyboard controller
16h	1-2-2-3	BIOS ROM checksum
17h		Initialize cache before memory autosize
18h		8254 timer initialization
1Ah		8237 DMA controller initialization
1Ch		Reset Programmable Interrupt Controller
20h	1-3-1-1	Test DRAM refresh
22h	1-3-1-3	Test 8742 Keyboard Controller
24h		Set ES segment register to 4 GB
28h		Autosize DRAM
29h		Initialize POST Memory Manager
2Ah		Clear 215 KB base RAM
2Ch	1-3-4-1	RAM failure on address line xxxx
2Eh	1-3-4-3	RAM failure on data bits xxxx of low byte of memory bus
2Fh		Enable cache before system BIOS shadow
32h		Test CPU bus-clock frequency
33h		Initialize Phoenix Dispatch Manager
36h		Warm start shut down
38h		Shadow system BIOS ROM
3Ah		Autosize cache
3Ch		Advanced configuration of chipset registers
3Dh		Load alternate registers with CMOS values
41h		Initialize extended memory for RomPilot.
42h		Initialize interrupt vectors
45h		DOCT device initialization
		POST device initialization

47h 48h Check video configuration against CMOS 49h Initialize PCI but and devices 4Ah Initialize SI but and devices 4Ah Check video dapters in system 4Bh Quietboot start (optional) 4Ch Shadow video BIOS ROM 4Eh Display BIOS copyright notice 50h Display CPU type and speed Initialize EISA board 51h Initialize EISA board 52h Fast keyboard 54h Set key click if enabled 55h Enable USB devices 68h 2-2-3-1 Test for unexpected interrupts 69h Initialize POST display service 5Ah Display prompt "Press F2 to enter SETUP" 5Bh Display CPU capte 5Ch Test RAM between 612 and 640 KB 60h Test extended memory address lines 64h Jump to User Patch 66h Configure advanced cache registers 67h Initialize Multi Processor APIC 68h Enable external and CPU caches 68h Display postible high address for UMB recovery 70h Display postible high address for	Code	Beeps	POST Routine Description
49h Initialize PCI bus and devices 4Ah Initialize all video adapters in system 4Bh QuetBoot start (optional) 4Ch Shadow video BIOS ROM 4Eh Display BIOS copyright notice 50h Display PIOS copyright notice 50h Display CPU type and speed 55h Test keyboard 52h Test keyboard 55h Set key click if enabled 55h Enable USB devices 58h 2-2-3-1 Test for unexpected interrupts 59h Initialize POST display service 5Ah Display prompt "Press F2 to enter SETUP" 5Bh Display prompt "Press F2 to enter SETUP" 5Bh Display prompt "Press F2 to enter SETUP" 6Ch Test RAM between 512 and 640 KB 60h Test extended memory 6Ch Test extended memory 6Ch Test extended memory address lines 66h Configure advanced cache registers 67h Initialize Multi Processor APIC 68h Enable external and CPU caches 68h Enable external and CPU caches 68h Setup System Management Mode (SMM) area 6Ah Display prompt advanced cache registers 66h Configure advanced cache registers 67h Initialize Multi Processor APIC 68h Enable external and CPU caches 68h Display prompt be external prompt be external prompt be deternal and control defaults (optional) 68h Display prompt be external prompt be deternal prompt be devices (optional) 68h Detect and intall external prompt be devices 68h Re-hinitialize DIOS Data Area 68	47h		Initialize I20 support
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AEEN Display BIOS copyright notice 50h Display CPU type and speed 51h Initialize EISA board 52h Test keyboard 54h Set key click if enabled 56h Enable USB devices 58h 2-2-3-1 Test for unexpected interrupts 59h Initialize POST display service 58h Display prompt "Press F2 to enter SETUP" 58h Display enter of the set with the s	4Bh		QuietBoot start (optional)
50h Display CPU type and speed 51h Initialize EISA board 52h Test keyboard 52h Set key click if enabled 55h Enable USB devices 58h 2-2-3-1 Test for unexpected interrupts 59h Initialize POST display service 58h Display prompt "Press F2 to enter SETUP" 58h Display compared to enter SETUP Test extended memory 62h Test extended memory 62h Test extended memory 62h Test extended memory 62h Test extended memory address lines 64h Display extended cache registers 66h Description of the set of	4Ch		Shadow video BIOS ROM
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Fest keyboard Set key click if enabled Set key click if enabled Set key click if enabled Enable USB devices Test for unexpected interrupts Set h 2-2-3-1 Test for unexpected interrupts Set h Display prompt 'Press F2 to enter SETUP' Set h Disable CPU cache Test RAM between 512 and 640 KB Coh Test extended memory Test extended memory address lines Set h Jump to User Patch1 Configure advanced cache registers Initialize Multi Processor APIC Set h Enable external and CPU cache Setup System Management Mode (SMM) area Setup System Management Mode (SMM) area Display external 1.2 cache size Seth Display possible high address for UMB recovery Toh Display pror messages Check for configuration errors Check for configuration errors Check for configuration errors Teh Display initialize coprocessor if present Seth Display initialize coprocessor if present Seth Display enror messages Check for configuration errors Teh Display initialize coprocessor if present Seth Display initialize coprocessor if present Seth Display enror messages Teh Check for configuration errors Teh Display initialize coprocessor if present Seth Disable onboard Super I/O ports and IRQs Seth Seth Detect and install external RS232 ports Seth Initialize PC-compatible PnP ISA devices Seth Re-initialize onboard I/O ports Porton Initialize BIOS Data Area Seth Initialize BIOS Data Area	50h		Display CPU type and speed
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Configure advanced cache registers	62h		Test extended memory address lines
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Initialize Multi Processor APIC	66h		Configure advanced cache registers
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Display possible high address for UMB recovery 70h Display error messages 72h Check for configuration errors 76h Check for keyboard errors 76h Set up hardware interrupt vectors 7Eh Initialize coprocessor if present 80h Disable onboard Super I/O ports and IRQs 81h Late POST device initialization 82h Detect and install external RS232 ports 83h Configure non-MCD IDE controllers 84h Detect and install external parallel ports Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area	6Bh		Load custom defaults (optional)
recovery Toh	6Ch		Display shadow-area message
72h Check for configuration errors 76h Check for keyboard errors 7Ch Set up hardware interrupt vectors 7Eh Initialize coprocessor if present 80h Disable onboard Super I/O ports and IRQs 81h Late POST device initialization 82h Detect and install external RS232 ports 83h Configure non-MCD IDE controllers 84h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area	6Eh		
76h Check for keyboard errors 7Ch Set up hardware interrupt vectors 7Eh Initialize coprocessor if present 80h Disable onboard Super I/O ports and IRQs 81h Late POST device initialization 82h Detect and install external RS232 ports 83h Configure non-MCD IDE controllers 84h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area	70h		Display error messages
7Ch Set up hardware interrupt vectors 7Eh Initialize coprocessor if present 80h Disable onboard Super I/O ports and IRQs 81h Late POST device initialization 82h Detect and install external RS232 ports 83h Configure non-MCD IDE controllers 84h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area 89h Enable Non-Maskable Interrupts (NMIs)	72h		Check for configuration errors
TEh Initialize coprocessor if present 80h Disable onboard Super I/O ports and IRQs 81h Late POST device initialization 82h Detect and install external RS232 ports 83h Configure non-MCD IDE controllers 84h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area 89h Enable Non-Maskable Interrupts (NMIs)	76h		Check for keyboard errors
B0h Disable onboard Super I/O ports and IRQs 81h Late POST device initialization 82h Detect and install external RS232 ports 83h Configure non-MCD IDE controllers 84h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area 89h Enable Non-Maskable Interrupts (NMIs)	7Ch		Set up hardware interrupt vectors
B1h Late POST device initialization B2h Detect and install external RS232 ports B3h Configure non-MCD IDE controllers B4h Detect and install external parallel ports B5h Initialize PC-compatible PnP ISA devices B6h Re-initialize onboard I/O ports Configure Motherboard Configurable Devices (optional) B8h Initialize BIOS Data Area B9h Enable Non-Maskable Interrupts (NMIs)	7Eh		Initialize coprocessor if present
Detect and install external RS232 ports Configure non-MCD IDE controllers Detect and install external parallel ports Initialize PC-compatible PnP ISA devices Re-initialize onboard I/O ports Configure Motherboard Configurable Devices (optional) Initialize BIOS Data Area Enable Non-Maskable Interrupts (NMIs)	80h		Disable onboard Super I/O ports and IRQs
83h Configure non-MCD IDE controllers 84h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area 89h Enable Non-Maskable Interrupts (NMIs)	81h		Late POST device initialization
84h Detect and install external parallel ports 85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area 89h Enable Non-Maskable Interrupts (NMIs)	82h		Detect and install external RS232 ports
85h Initialize PC-compatible PnP ISA devices 86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area 89h Enable Non-Maskable Interrupts (NMIs)	83h		Configure non-MCD IDE controllers
86h Re-initialize onboard I/O ports 87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area 89h Enable Non-Maskable Interrupts (NMIs)	84h		Detect and install external parallel ports
87h Configure Motherboard Configurable Devices (optional) 88h Initialize BIOS Data Area 89h Enable Non-Maskable Interrupts (NMIs)	85h		Initialize PC-compatible PnP ISA devices
(optional) 88h Initialize BIOS Data Area 89h Enable Non-Maskable Interrupts (NMIs)	86h		Re-initialize onboard I/O ports
89h Enable Non-Maskable Interrupts (NMIs)	87h		
	88h		Initialize BIOS Data Area
	89h		Enable Non-Maskable Interrupts (NMIs)
	8Ah		

Code	Beeps	POST Routine Description
8Bh	-	Test and initialize PS/2 mouse
8Ch		Initialize floppy controller
8Fh		Determine number of ATA drives (optional)
90h		Initialize hard-disk controllers
91h		Initialize local-bus hard-disk controllers
92h		Jump to UserPatch2
93h		Build MPTABLE for multi-processor boards
95h		Install CD ROM for boot
96h		Clear huge ES segment register
97h		Fixup Multi Processor table
98h	1-2	Search for option ROMs. One long, two short beeps on checksum failure.
99h		Check for SMART drive (optional)
9Ah		Shadow option ROMs
9Ch		Set up Power Management
9Dh		Initialize security engine (optional)
9Eh		Enable hardware interrupts
9Fh		Determine number of ATA and SCSI drives
A0h		Set time of day
A2h		Check key lock
A4h		Initialize Typematic rate
A8h		Erase F2 prompt
AAh		Scan for F2 key stroke
ACh		Enter SETUP
AEh		Clear Boot flag
B0h		Check for errors
B1h		Inform RomPilot about the end of POST.
B2h		POST done- prepare to boot operating system
B4h	1	One short beep before boot
B5h		Terminate QuietBoot (optional)
B6h		Check password (optional)
B7h		Initialize ACPI BIOS
B9h		Prepare Boot
BAh		Initialize SMBIOS
BBh		Initialize PnP Option ROMs
BCh		Clear parity checkers
BDh		Display MultiBoot menu
BEh		Clear screen (optional)
BFh		Check virus and backup reminders
C0h		Try to boot with INT 19
C1h		Initialize POST Error Manager (PEM)
C2h		Initialize error logging
C3h		Initialize error display function
C4h		Initialize system error handler
C5h		PnPnd dual CMOS (optional)
C6h		Initialize notebook docking (optional)

Code	Beeps	POST Routine Description
C7h		Initialize notebook docking late
C8h		Force check (optional)
C9h		Extended checksum (optional)
CAh		Redirect Int 15h to enable remote keyboard
CBh		Redirect Int 13h to Memory Technologies Devices such as ROM, RAM, PCMCIA, and serial disk.
CCh		Redirect Int 10h to enable remote serial video
CDh		Re-map I/O and memory for PCMCIA
CEh		Initialize digitizer and display message.
D2h		Unknown interrupt
	The following are for boot block	k in Flash ROM
E0h		Initialize the chipset
E1h		Initialize the bridge
E2h		Initialize the CPU
E3h		Initialize the system timer
E4h		Initialize system I/O
E5h		Check force recovery boot
E6h		Checksum BIOS ROM
E7h		Go to BIOS
E8h		Set Huge Segment
E9h		Initialize Multi Processor
EAh		Initialize OEM special code
EBh		Initialize PIC and DMA
ECh		Initialize Memory type
EDh		Initialize Memory size
EEh		Shadow Boot Block
EFh		System memory test
F0h		Initialize interrupt vectors
F1h		Initialize Run Time Clock
F2h		Initialize video
F3h		Initialize System Management Mode
F4h	1	Output one beep
F5h		Clear Huge Segment
F6h		Boot to Mini DOS
F7h		Boot to Full DOS

$Index\ of\ Symptom-to-FRU\ Error\ Message$

LCD-Related Symptoms

Symptom / Error	Action in Sequence
LCD backlight doesn't work	First, plug a monitor to CRT port. Next, enter BIOS utility to running "Load Default Settings" then reboot the system.
	Reconnect the LCD connectors.
	Keyboard (if the brightness function key doesn't work).
	LCD cable
	LCD inverter
	LCD
	Main board
LCD is too dark	Enter BIOS Utility to execute "Load Setup Default Settings", then
LCD brightness cannot be adjusted	reboot system.
	Reconnect the LCD connectors.
	Keyboard (if the brightness function key doesn't work).
	LCD cable
	LCD inverter
	LCD
	Main board
Unreadable LCD screen	Reconnect the LCD cable
Missing pels in characters	LCD cable
Abnormal screen	LCD
Wrong color displayed	Main board
LCD has extra horizontal or vertical lines displayed.	

Indicator-Related Symptoms

Symptom / Error	Action in Sequence
Indicator incorrectly remains off or on, but system runs correctly	Main board
HDD/CD-ROM active indicators cannot work	HDD/CD-ROM drive
	Device driver
	Main board

Power-Related Symptoms

Symptom / Error	Action in Sequence
Power shuts down during operation	Power source (battery pack and power adapter). See "Power System Check" on page 84.
	Battery pack
	AC adapter
	See if the thermal module is overheat (Heat sink or fan).
	Main board
The system cannot power-on.	Power source (battery pack and power adapter). See "Power System Check" on page 84.
	Battery pack
	Power adapter
	CPU
	Main board
The system cannot power-off.	In Windows XP operating system, hold and press the power switch for more than 4 seconds. If the system can power off, then the main board is OK. Verify OS in the HDD.
	Main board

Power-Related Symptoms

Symptom / Error	Action in Sequence
Battery can't be charged or discharged	See "Check the Battery Pack" on page 85.
	Battery pack
	Main board
System hang during POST	ODD/HDD/FDD/RAM module
	Main board

PCMCIA-Related Symptoms

Symptom / Error	Action in Sequence
System cannot detect the PC Card (PCMCIA)	PCMCIA slot assembly
	Main board
PCMCIA slot pin is damaged.	PCMCIA slot assembly
PC Card cannot be inserted or ejected	Check if the PCMCIA slot is blocked
	Main board

Memory-Related Symptoms

Symptom / Error	Action in Sequence
Memory count (size) appears different from actual size.	Enter BIOS Setup Utility to execute "Load Default Settings" then reboot system.
	RAM module
	Main board
	Check BIOS revision
System can power on, but you hear two long	Reinsert DIMM
beeps: "B, B" and the LCD is blank.	DIMM
	Main board

Speaker-Related Symptoms

Symptom / Error	Action in Sequence
In Windows, multimedia programs, no sound	OS volume control
comes from the computer.	Audio driver
	Speaker
	Main board
Internal speakers make noise or emit no sound.	Speaker
	Main board
Microphone cannot work	Audio driver
	Volume control in Windows XP
	Main board

Power Management-Related Symptoms

Symptom / Error	Action in Sequence
The system will not enter hibernation mode	Power option in Windows XP
	Hard disk drive
	Main board
The system doesn't enter standby mode after	Driver of Power Option Properties
closing the lid of the portable computer.	Lid close switch in upper case
	Main board

Power Management-Related Symptoms

Symptom / Error	Action in Sequence
The system doesn't resume from hibernation/	Connect AC adapter then check if the system resumes from
standby mode.	Standby/Hibernation mode.
	Check if the battery is low.
	Hard disk drive
	Main board
The system doesn't resume from standby mode	LCD cover switch
after opening the lid of the portable computer.	Main board
Battery fuel gauge in Windows doesn't go higher	Refresh battery (continue use battery until power off, then charge
than 90%.	battery).
	Battery pack
	Main board
System hangs intermittently.	Reconnect hard disk/CD-ROM drives.
	Main board

Peripheral-Related Symptoms

Symptom / Error	Action in Sequence
System configuration does not match the installed devices.	Enter BIOS Setup Utility to execute "Load Setup defaults", then reboot system.
	Reconnect hard disk/CD-ROM drives/FDD or other peripherals.
	Main board
External display does not work correctly.	Press Fn+F5, LCD/CRT/Both display switching
	Keyboard
	Main board
USB does not work correctly	Main board
Print problems.	Enter BIOS Setup Utility to execute "Load Default Settings" then reboot the system.
	Run printer self-test.
	Printer driver
	Printer cable
	Printer
	Main board
Parallel port device problems	Enter BIOS Setup Utility to execute "Load Default Settings" then reboot the system.
	Device driver
	Device cable
	Device
	Main board

Keyboard/Touchpad-Related Symptoms

Symptom / Error	Action in Sequence
Keyboard (one or more keys) does not work.	Reconnect the keyboard cable.
	Keyboard
	Main board
Touchpad does not work.	Reconnect touchpad cable.
	Touchpad board
	Main board

Modem/LAN-Related Symptoms

Symptom / Error	Action in Sequence
Internal modem does not work correctly.	Phone cable Driver Reconnect the Internal modem cable to the main board tightly. Main board
Internal LAN does not work correctly	Lan cable Driver Main board

NOTE: If you cannot find a symptom or an error in this list and the problem remains, see "Undetermined Problems" on page 98.

Intermittent Problems

Intermittent system hang problems can be caused by a variety of reasons that have nothing to do with a hardware defect, such as: cosmic radiation, electrostatic discharge, or software errors. FRU replacement should be considered only when a recurring problem exists.

When analyzing an intermittent problem, do the following:

- 1. Run the diagnostic test for the system board in loop mode at least 10 times.
- 2. If no error is detected, do not replace any FRU.
- 3. If any error is detected, replace the FRU. Rerun the test to verify that there are no more errors.

Undetermined Problems

The diagnostic problems does not identify which adapter or device failed, which installed devices are incorrect, whether a short circuit is suspected, or whether the system is inoperative.

Follow these procedures to isolate the failing FRU (do not isolate non-defective FRU).

NOTE: Verify that all attached devices are supported by the computer.

NOTE: Verify that the power supply being used at the time of the failure is operating correctly. (See "Power System Check" on page 84):

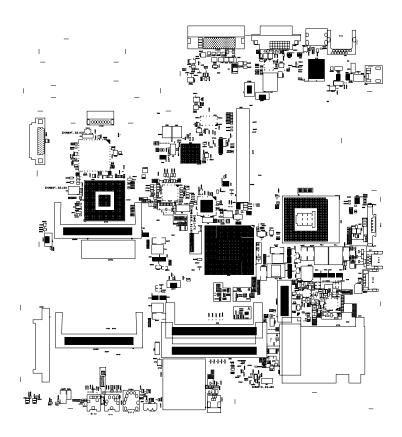
- Power-off the computer.
- 2. Visually check them for damage. If any problems are found, replace the FRU.
- Remove or disconnect all of the following devices:

Non-Acer devices
Printer, mouse, and other external devices
Battery pack
Hard disk drive
DIMM

- PC Cards
- Power-on the computer. 4.
- Determine if the problem has changed. 5.
- If the problem does not recur, reconnect the removed devices one at a time until you find the failing FRU. 6.
- If the problem remains, replace the following FRU one at a time. Do not replace a non-defective FRU:
 - System board LCD assembly

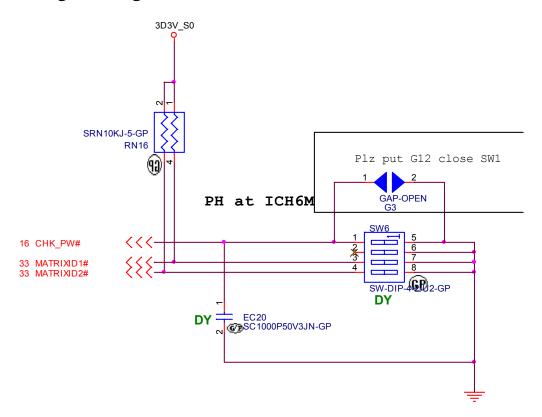
Jumper and Connector Locations

Mainboard Layout



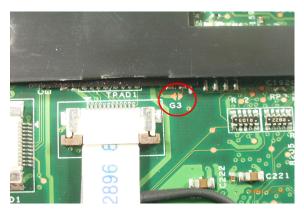
Chapter 5 99

Switching Setting



Switch	Function
SW6-1	CHK_PW&#</td></tr><tr><td>SW6-2</td><td>No function</td></tr><tr><td>SW1-3</td><td>MATRIXID 1#</td></tr><tr><td>SW1-4</td><td>MATRIXID 2#</td></tr></tbody></table>

Clear Password



PIN Pad: Bypassing Password Check, Keep shorting G3(2 triangle pad) as above PIN pad and then powering on the system will force the BIOS to clear Supervisor and User passwords. That means both the power-on and setup passwords are all cleared.

Chapter 5 101

FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of Aspire 9510 and TravelMate6500. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

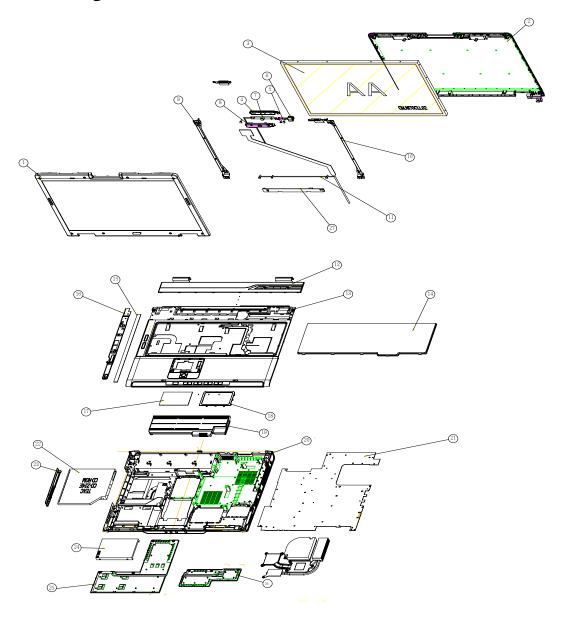
Please note that WHEN ORDERING FRU PARTS, you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted on the printed service guide. For ACER AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code from those given in the FRU list of this printed service guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Acer office on how to return it.

NOTE: Please visit website http://aicsl.acer.com.tw/spl/ for the up to date SPL.

Chapter 6 102

Exploded Diagram



Item	Description	Item	Description
1	LCD bezel	2	LCD panel
3	LCD module	4	CAS camera upper case
5	Camera hinge	6	Camera cap
7	CCD PCB	8	Camera lower case
9	Left LCD bracket	10	Right LCD bracket
11	LCD cable	12	Middle cover
13	Upper case	14	Keyboard
15	Launch board	16	LED bracket
17	Touch pad	18	Touchpad bracket
19	Battery	20	Lower case
21	Mainboard	22	ODD

Item	Description	Item	Description
23	ODD bezel	24	HDD
25	HDD cover	26	DIMM cover
27	Inverter board		

Spare Part List

TM6500 G72MV 128M

Category	Part Name	Description	Part No.
ADAPTER			
	ADAPTER 90W LITEON PA-1900- 04WR	ADT 90W LITEON PA-1900- 04WR	AP.09003.005
	ADAPTER 90W DELTA ADP-90SB BBAAF	ADT 90W DELTA ADP-90SB BBAAF	AP.09001.004
	ADAPTER 90W LISHIN SLS0202C19A54LF	ADT 90W LISHIN SLS0202C19A54LF	AP.09006.005
	ADAPTER 90W LISHIN SLS0202C19A20LF	ADT 90W LISHIN SLS0202C19A20LF	AP.09006.004
BATTERY			
	BATTERY PACK LI+ 8CELL 2.4MAH SANYO	BTY PACK LI+ 8C 2.4AH SANYO	BT.00803.018
	BATTERY PACK LI+ 8CELL 2.4MAH SONY	BTY PACK LI+ 8C 2.4AH SONY	BT.00807.010
BAORDS			
•	MODEM BOARD FOXCONN T60M845.01	MODEM MDC1.5 AGERE AZALIA G	54.TCZV1.001
	VGA BOARD	KIRKINI VGA BD G72M/ 128M(D)	55.TC1V1.001
	BLUETOOTH BOARD FOXCONN BCM2045 V01	BT MODULE FOXCONN BCM2045 V01	54.TB2V1.001
	WIRELESS LAN BOARD 802.11ABG INTEL 3945 MW2	WLAN 802.11ABG INTEL 3945 MW2	KI.GLN01.002
The second secon	WIRELESS LAN BOARD 802.11ABG INTEL 3945 MW1	WLAN 802.11ABG INTEL 3945 MW1	KI.GLN01.001
	WIRELESS LAN BOARD 802.11ABG INTEL 3945 RW	WLAN 802.11ABG INTEL 3945 RW	KI.GLN01.003
	WIRELESS LAN BOARD 802.11BG INTEL INTEL 3945BG	WLAN PRO/WIRELESS 3945BG	KI.GLN01.005
	USB BOARD	KIRKINI USB BD(D)	55.TC1V1.002
	TOUCHPAD BOARD SYNPATICT M61PUF1G372	TOUCHPAD SYNPATICTM61PUF1G372	56.A46V1.001

	ED BOARD LUETOOTH CABLE	KIRKINI LED 06506-1 BD(D)	55.TC1V1.003
BI	LUETOOTH CABLE		
BL	LUETOOTH CABLE		
Bl	LUETOOTH CABLE		
Bl	LUETOOTH CABLE		
		C.A. BT CABLE KIRKINI	50.TC1V1.003
7			
Us	SB CABLE	C.A. FFC USB KIRKINI	50.TC1V1.001
D-9001 100-20-000 (add-1-000-1-000)			
No. 2007 - 100. 200 (See Contract on the See C			
LE	ED BOARD CABLE	C.A. LED FFC KIRKINI	50.TC1V1.005
Mar LONG 107 Williams			
Something that the same and the			
TO	OUCHPAD CABLE	C.A. TP FFC KIRKINI	50.TC1V1.004
the same of the same			
M	ODEM CABLE W/ RJ11 SOCKET	SKT JACK 6P CBL-30202- 0255 SMD	50.TC1V1.006
0.121.50	0)4/50 0000 0 54 405)4404		
CABLES PC	OWER CORD 2.5A 125V USA	CORD USA/W CNS 2.5A 125V 8121-	27.01518.781
CABLES PO	OWER CORD 7A 250V 2PIN	CODE 7A250V 2P 1830	27.01518.531
K	OREAN	KOREAN	
-	OWER CORD 7A 125V 2PIN APEN	CODE JAPAN 7A 125V 2P BK	27.01518.551
	OWER CORD 2.5A 250V	CODE 2.5A 250V AUSTRALIA	27.01518.621
	USTRALIA	BK	12.13.13.1
	OWER CORD 10A 125V 3PIN US	CODE 10A 125V 3P US BK	27.01518.641
CABLES PO	OWER CORD 10A 125V US	CODE US 10A 125V BK	27.T30V1.001
	OWER CORD 10A 125V 05 OWER CORD 10A 250V 3PIN	CODE 05 10A 125V BK	27.13071.001
	ENMARK BK	DENMARK BK	
	OWER CORD 10A 3PIN BK	CODE DENMARK 10A 3P BK	27.01518.561
	ENMARK	CODE 464 250/ COUTU	27.04549.004
	OWER CORD 16A 250V SOUTH FRICA BK	CODE 16A 250V SOUTH AFRICA BK	27.01518.681
CABLES PO	OWER CORD 10A 250V 3PIN BK	CODE SOUTH AFRICA 10A	27.01518.571
	OUTHAFRICA	250V BK	
	OWER CORD 10A 250V 3PIN WISS BK	CODE 10A 250V 3P SWISS BK	27.01518.691
	OWER CORD 10A 250V SWISS	CODE SWISS POWER 10A	27.01518.581
		250V BK	

Category	Part Name	Description	Part No.
CABLES	POWER CORD 10A 250V 3PIN CHINA BK	CORD 10A 250V 3P CHINA BK	27.01518.701
CABLES	POWER CORD 10A 250V 3PIN CHINA	CORD CHINA 10A 250V 3P	27.01518.591
CABLES	POWER CORD 10A 250V 3PIN ITALY BK	CORD 10A 250V 3P ITALY BK	27.01518.711
CABLES	POWER CORD 10A 250V 3PIN ITALY	CORD ITALY 10A 250V 3P BK	27.01518.611
CABLES	POWER CORD 10A 250V SOUTH AFRICA BK (INDIA)	CORD 10A 250V SOUTH AFRICA BK	27.01518.721
CABLES	POWER CORD 2.5A 250V SOUTH AFRICA BK (INDIA)	CORD 2.5A 250V SOUTH AFRICA BK	27.01518.631
CABLES	POWER CORD 16A 250V 3PIN EUR BK	CORD 16A 250V 3P EUR BK	27.01518.731
CABLES	POWERCORD220V3PINEUR	CORD EUR 220V 3P BK	27.T30V1.004
CABLES	POWER CORD 5A 250V 3PIN UK BK	CODE 5A 250V 3P UK BK	27.03118.001
CABLES	POWERCORD3A250V3PINUK	CODE UK 3A 250V 3P BK	27.01518.541
CABLES	POWERCORDACA/ACNZ	POWER CODE ACA / ACNZ ANNIE	27.03218.021
CABLES	POWER CODE 7A 125V 2PIN JAPAN	CODE 7A 125V JAPAN 2PIN BK	27.03518.161
CASE/COVER/BRACK	ET ASSEMBLY		
	USB BRACKET	ASSY USB IO BRK KIRKINI	33.TC1V1.001
	LED BRACKET	ASSY LED BRACKET	33.TC1V1.002
	TOUCHPAD BRACKET	CVR TP FRAME TM KIRKINI	42.TC1V1.001
	MIDDLE COVER	ASSY MIDDLE COVER TM KIRKINI	60.TC1V1.003
7	HDD COVER	ASSY HDD DOOR DASP KIRKINI	42.TC1V1.002
	DIMM COVER	ASSYDIMMCOVERKIRKINI	42.TC1V1.003

Category	Part Name	Description	Part No.
	UPPER CASER W/COVER	ASSY UCASE TM KIRKINI	60.TC1V1.002
_	SWITCH CABLE&MICROPHONE		
P			
CABLES	COVER SWITCH CABLE	C.A. COVER SWITCH HT	50.TC1V1.002
		KIRKINI	
MICROPHONE	MICROPHONE SHORT	MICROPHONE SUNMOWNG	23.TCBV1.002
MODODUONE	MODODIJONE LONG	MYALL	00 704/4 005
MICROPHONE	MICROPHONE LONG	MICROPHONELONGKIRKINI	23.TC1V1.005
	LOWER CASE W/SPEAKER	ASSY LCASE EZ KIRKINI	60.TC1V1.001
All Value			
ODEAKED	ODE AVED WOOSED		00 TO4) (4 004
SPEAKER	SPEAKER WOOFER	SPEAKERWOOFERKIRKINI	23.TC1V1.004
SPEAKER	SPEAKER PACK LEFT/RIGHT	SPEAKER KIRKINI	23.TC1V1.003
COMBO MODULE	COMBO MODULE 24X GBASE	ASSY DVD GBASE COMBO	6M.TC1V1.001
	OPTICAL BRACKET	BRKTODDBRZCKETKIRKINI	33.TC1V1.003
0			
	COMBO BEZEL	ASSY DVD GBASE COMBO	42.TC1V1.004
		KIRKINI	.2
COMBO MODULE	CDRW/DVD COMBO DRIVE 24X	COMBO PHI/SCB5265 MYALL	KO.02408.010
COMBO MODULE	PHILIPS SCB5265 W/O BEZEL	NOBZL	10.02400.010
COMBO MODULE	CDRW/DVD COMBO DRIVE 24X	COMBO TSST/TS-L462C	KO.02404.007
	PHILIPS SCB5265 W/O BEZEL	AC02 LF	
CPU/PROCESSOR			-
CPU/PROCESSOR	CPU DC YONAH T2500 2GMHZ	IC CPU DC YONA T2500 2G	KC.25001.DTP
	INTEL	PGA	
CPU/PROCESSOR	CPU DC YONAH T2300E	IC CPU DC YONAH T2300E	KC.23E01.DTP
	1.66GMHZ INTEL	1.66G	
CPU/PROCESSOR	CPU DC YONAH T2300 1.66GMHZ	IC CPU DC YONA T2300	KC.23001.DTP
ODI LIDDOGEOGO	INTEL	1.66G PGA	KO 04004 DTD
CPU/PROCESSOR	CPU DC YONAH T2400 1.83G INTEL	IC CPU DC YONA T2400 1.83G PGA	KC.24001.DTP
CPU/PROCESSOR	"CPU DC YONAH T2600 2,16GMHZ	IC CPU DC YONA T2600	KC.26001.DTP
OI OII ROOLSSOR	INTEL"	2.16G PGA	NO.20001.DTF
CPU/PROCESSOR	CPU SC YONAH T1300 1.66GMHZ	IC CPU SC YONA T1300	KC.13001.STP
	INTEL	1.66G PGA	
CPU/PROCESSOR	CPU YONAH 1.73GMHZ 533 INTEL	IC CPU YONAH 1.73G/533	KC.22501.DTP
		T2250	
CPU/PROCESSOR	CPU YONAH 1.60GMHZ 533 INTEL	IC CPU YONAH 1.60G/533	KC.20501.DTP
		T2050	

Category	Part Name	Description	Part No.
CPU/PROCESSOR	CPU YONAH 1.86GMHZ 533 INTEL	IC CPU YONAH 1.86G/533 T1350	KC.13501.STP
DVD-RW DRIVE	DVD-RW MODULE 8X SUPER MULTI GBASE	ASSY ODD SUPERMULTI TM KIRKINI	6M.TC1V1.002
CASE/COVER/ BRACKET ASSEMBLY	OPTICAL BRACKET	BRKTODDBRZCKETKIRKINI	33.TC1V1.003
CASE/COVER/ BRACKET ASSEMBLY	DVD-RW SUPER MULTI BEZEL	ASSY DVD GBASE SPMT TM KIRKINI	42.TC1V1.005
DVD-RW DRIVE	DVD-RW DRIVE 8X SUPER MULTI PHILIPS SDVD-8821 W/O BEZEL	SUP-MULT PHI/SDVD-8821 KERKINI	KU.00809.005
DVD-RW DRIVE	DVD-RW DRIVE 8X SUPER MULTI TOSHIBA TS-L632D W/O BEZEL	S-MULT 8X TST/TS-L632D W/ O BZL	KU.00801.014
FAN		•	
	FAN BIG	FAN MAIN KIRKINI LONG WIRE SUN	23.TC1V1.001
	FAN BIG	FAN MAIN KIRKINI LONG WIRE FOR	23.TC1V1.001
	FAN 2ND SMALL	FAN 2ND KIRKINI SUNON	23.TC1V1.002
HDD/HARD DISK DRIVE	"HDD MODULE 80G 2.5"" 5400RPM SATA"	TBD	
	HDD BRACKET	TBD	33.TC1V1.004
HDD/HARD DISK DRIVE	HDD 80G 5400RPM SATA SEAGATE ST98823AS LF	HDD SATA 80GB SEAGATE ST98823A	KH.08001.023
HDD/HARD DISK DRIVE	HDD 80G 5400RPM SATA TOSHIBA ARES-B_S MK8032GSX F/W AS111G	HDD 80GB SATA TOSHIBA 5400RPM	KH.08004.005
HDD/HARD DISK DRIVE	"HDD 80G 5400RPM SATA HITACHI 2.5IN.1.5G NCQ MORAGA+HTS541080G9SA00,C60 D"	HDD 80GB HGST 0A26924 ROHS	KH.08007.015
HDD/HARD DISK DRIVE	HDD 80G 5400RPM SATA WD WD800BEVS-22LAT0 ML60 LF FW:T0	HDD 80GB WD800BEVS- 22LAT0	KH.08008.031
HDD/HARD DISK DRIVE	"HDD MODULE 100G 2.5"" 5400RPM SATA"	ASSY 2ND HDD KIRKINI	
	HDD BRACKET 2ND	ASSY 2ND HDD KIRKINI	33.TC1V1.005

Category	Part Name	Description	Part No.
HDD/HARD DISK DRIVE	HDD 100G 5400RPM HITACHI SATA 1.5G NCQ MORAGA+HTS541010G9SA00 FW:S60D	HDD 100GB HGST 0A26930 ROHS	KH.10007.005
HDD/HARD DISK DRIVE	HDD 100G 5400RPM SATA TOSHIBA ARES-B_S MK1032GSX F/W AS021G	HDD 100GB SATA TOSHIBA 5400RPM	KH.10004.003
HDD/HARD DISK DRIVE	HDD 100G 5400RPM SATA SEAGATE ST9100824AS ROHS	HDD 100G SATA ST9100824AS ROHS	KH.10001.008
HDD/HARD DISK DRIVE	HDD 100G 5400RPM SATA WD1000BEVS-22LAT0 ML60 LF FW:T0	HDD 100GB WD1000BEVS- 22LAT0	KH.10008.002
HDD/HARD DISK DRIVE	"HDD MODULE 100G 2.5"" 7200RPM SATA"	TBD	
CASE/COVER/ BRACKET ASSEMBLY	HDD BRACKET	TBD	33.TC1V1.004
HDD/HARD DISK DRIVE	HDD 100G 7200RPM SATA HTS721010G9SA00	HDD 100GB HGST HTS721010G9SA00	KH.10007.007
HDD/HARD DISK DRIVE	"HDD MODULE 120G 2.5"" 5400RPM SATA"	TBD	
CASE/COVER/ BRACKET ASSEMBLY	HDD BRACKET	ASSYHDDBRACKETKIRKINI	33.TC1V1.004
HDD/HARD DISK DRIVE	HDD 120G 5.4K TOSHIBA SATAI 1.5G W/NCQ MK1234GSX LF TAURUS FW:AH001A	HDD 120GB SATA TOSHI	KH.12004.003
HDD/HARD DISK DRIVE	HDD 5.4K SATA SEAGATE ST9120821AS LF MERCURY 2 FW:3.06	HDD 120GB SEAGATE ST9120821AS	KH.12001.025
HDD/HARD DISK DRIVE	HDD 120G 5400RPM SATA SAMSUNG HM120JI M60S LF FW: YF100-10	HDD 120GB SATA SAMSUNG 5400RPM	KH.1200B.002
HDD/HARD DISK DRIVE	HDD 120G 5400RPM SATA WD WD1200BEVS-22LAT0 ML60 LF FW:T0	HDD 120GB WD1200BEVS- 22LAT0	KH.12008.016
HDD/HARD DISK DRIVE	"HDD MODULE 160G 2.5"" 5400RPM SATA"	TBD	
CASE/COVER/ BRACKET ASSEMBLY	HDD BRACKET	TBD	33.TC1V1.004
HDD/HARD DISK DRIVE	HDD 60G 5400RPM SATA SEAGATE ST9160821AS	HDD 160GB SEAGATE ST9160821AS	KH.16001.021
HEATSINK			
	CPU HEATSINK W/O FAN	ASSY CPU HEAT SINK ROBIN KIRKI	34.TC1V1.001

Category	Part Name	Description	Part No.
	VGA HEATSINK	ASSY VGA HEAT SINK ROBIN KIRKI	34.TC1V1.002
KEYBOARD	1	1	1
KEYBOARD	KB 105KEY DARFON NSK-AFB1D US-INTERNATIONAL	KB DARFON NSK-AFB1D US- INT105K	KB.TBG01.001
KEYBOARD	KB 105KEY DARFON NSK-AFB02 CHINES	KB DARFON NSK-AFB02 CHINES105K	KB.TBG01.002
KEYBOARD	KB 106KEY DARFON NSK-AFB0S SPANISH	KB DARFON NSK-AFB0S SPANISH106	KB.TBG01.003
KEYBOARD	KB 105KEY DARFON NSK-AFB03 THAI	KB DARFON NSK-AFB03 THAI 105K	KB.TBG01.004
KEYBOARD	KB 106KEY DARFON NSK-AFB1B BRAZILI	KB DARFON NSK-AFB1B BRAZILI106	KB.TBG01.005
KEYBOARD	KB 105KEY DARFON NSK-AFB0K KOREAN	KB DARFON NSK-AFB0K KOREAN 105	KB.TBG01.006
KEYBOARD	KB 106KEY DARFON NSK-AFB0U UK	KB DARFON NSK-AFB0U UK 106KEYS	KB.TBG01.007
KEYBOARD	KB 106KEY DARFON NSK-AFB0G GERMAN	KB DARFON NSK-AFB0G GERMAN 106	KB.TBG01.008
KEYBOARD	KB 106KEY DARFON NSK-AFB0E ITALIAN	KB DARFON NSK-AFB0E ITALIAN106	KB.TBG01.009
KEYBOARD	KB 106KEY DARFON NSK-AFB0F FERENCH	KB DARFON NSK-AFB0F FERENCH106	KB.TBG01.010
KEYBOARD	KB 106KEY DARFON NSK-AFB00 SWISS	KB DARFON NSK-AFB00 SWISS 106K	KB.TBG01.011
KEYBOARD	KB 106KEY DARFON NSK-AFB06 PORTUGU	KB DARFON NSK-AFB06 PORTUGU106	KB.TBG01.012
KEYBOARD	KB 105KEY DARFON NSK-AFB0A ARABIC	KB DARFON NSK-AFB0A ARABIC 105	KB.TBG01.013
KEYBOARD	KB 106KEY DARFON NSK-AFB1A BELGIAN	KB DARFON NSK-AFB1A BELGIAN106	KB.TBG01.014
KEYBOARD	KB 106KEY ARFON NSK-AFB0W SWEDISH	KB DARFON NSK-AFB0W SWEDISH106	KB.TBG01.015
KEYBOARD	KB 106KEY DARFON NSK-AFB0C CZECH	KB DARFON NSK-AFB0C CZECH 106K	KB.TBG01.016
KEYBOARD	KB 106KEY DARFON NSK-AFB0Q HUNGAR	KB DARFON NSK-AFB0Q HUNGAR106	KB.TBG01.017
KEYBOARD	KB 106KEY DARFON NSK-AFB0N NORWEGI	KB DARFON NSK-AFB0N NORWEGI106	KB.TBG01.018
KEYBOARD	KB 106KEY DARFON NSK-AFB0D DANISH	KB DARFON NSK-AFB0D DANISH106K	KB.TBG01.019
KEYBOARD	KB 106KEY DARFON NSK-AFB0T TURKISH	KB DARFON NSK-AFB0T TURKISH106	KB.TBG01.020
KEYBOARD	KB 106KEY DARFON NSK-AFB0M CAN FRENCH	KB DARFON NSK-AFB0M CAN FR106K	KB.TBG01.022
KEYBOARD	KB 105KEY DARFON NSK-AFB0L GREEK	KB DARFON NSK-AFB0L GREEK105K	KB.TBG01.024
KEYBOARD	KB 105KEY DARFON NSK-AFB0H HEBREW	KB DARFON NSK-AFB0H HEBREW105	KB.TBG01.025

Category	Part Name	Description	Part No.
KEYBOARD	KB 105KEY DARFON NSK-AFB0R RUSSIAN	KB DARFON NSK-AFB0R RUSSIAN105	KB.TBG01.026
KEYBOARD	KB 106KEY DARFON NSK-AFB1F SLOVEN	KB DARFON NSK-AFB1F SLOVEN106	KB.TBG01.027
LCD	"LCD MODULE 17.1"" WXGA+ NONE GLARE W/CCD"	"ASSY LCD 17.1"" P-SL TM KIR AUO "	6M.TC1V1.011
	INVERTER BOARD DARFON VK.21189.402	INVERTER 17" VK.21189.402	19.TCBV1.001
	"LCD CABLE 17"""	"C.A. 17"" SL KIRKINI "	50.TC1V1.007
	LCD BRACKET LEFT	BRKT-R LCD KIRKINI	33.TC1V1.006
	LCD BRACKET RIGHT	BRKT-L LCD KIRKINI	33.TC1V1.007
	CAMERA HOLDER	HLDR CAMERA SIDE RIM KIRKINI	42.ADFV1.001
	CAMERA UPPER CASE	CAS CAMERA L-CASE KIRKINI	60.ADFV1.007
•	CAMERA HOLDER CAP	HLDR CAMERA CAP KIRKINI	42.ADFV1.002
	CAMERA LATCH	LATCH CAMERA HINGH KIRKINI	33.ADFV1.003

Category	Part Name	Description	Part No.
	CAMERA LOWER CASE	ASSY CAMERA LCASE KIRKINI	60.ADFV1.006
CASE/COVER/ BRACKET ASSEMBLY	"LCD PANEL 17"" W/HINGE"	ASSY LCD 17.1 PP-SL TM KIRKINI	60.TC1V1.005
	HINGE PACK LEFT/RIGHT	HINGE PACK LEFT/RIGHT	6K.TC1V1.001
	"LCD BEZEL 17.1"" W/LOGO"	ASSY LCD BEZEL KIRKINI	60.ADFV1.004
CASE/COVER/ BRACKET ASSEMBLY	CCD CAMERA 1.3M LOGITECH 961458-2000 L	CAMERA CMOS 1.3M 961458- 2000 L	56.ABAV1.001
	WIRELESS ANTENNA	ANTENNA CABLE MYALL2	25.ADFV1.001
LCD	"LCD 17.1"" WXGA+ AUO B170PW03 V3 NONE GLARE"	"LCD17""WAUB170PW03V3	LK.17105.006
LCD	"LCD 17.1"" WXGA+ QDI QD17TL02-05 NONE GLARE"	"LCD 17""W QDI QD17TL02- 05"	LK.17109.001
	MAINBOARD KIRKINI G72 W/RTC BATTERY	KIRKINI MB/G72 TM 05248-2 DIP	MB.TC101.001
	RTC BATTERY	BTYRTCMITSUBISHIROHS	23.TCBV1.003
MEMORY	SDIMM 512M DDRII533 HYNIX HYMP564S64BP6-C4	SODIMM 512M HYMP564S64BP6-C4	KN.5120G.013
MEMORY	SDIMM 512M DDRII533 NANYA NT512T64UH8A1FN-37B	SODIMM512M NT512T64UH8A1FN-37B	KN.51203.023

Category	Part Name	Description	Part No.
MEMORY	SDIMM 512M DDRII533 SAMSUNG M470T6554CZ3-CD5	SODIMM 512M M470T6554CZ3-CD5	KN.5120B.015
MEMORY	SDIMM 256M DDRII533 NANYA NT256T64UH4A1FN-37B	DIMM 256M NT256T64UH4A1FN-37B	KN.25603.029
MEMORY	SDIMM 256M DDRII533 HYNIX HYMP532S64BP6-C4	SODIMM 256M HYMP532S64BP6-C4	KN.2560G.012
MEMORY	SDIMM 1GB DDRII533 NANYA NT1GT64U8HA0BN-37B	SODIMM 1G NT1GT64U8HA0BN-37B	KN.1GB03.006
MEMORY	SDIMM 256MB DDRII667 NANYA NT256T64UH4A1FN-3C	SODIMM 256M NT256T64UH4A1FN-3C	KN.25603.027
MEMORY	SDIMM 256MB DDRII667 HYNIX HYMP532S64BP6-Y5	SODIMM 256M HYMP532S64BP6-Y5	KN.2560G.013
MEMORY	SDIMM 512MB DDRII667 NANYA NT512T64UH8A1FN-3C	SODIMM 512M NT512T64UH8A1FN-3C	KN.51203.025
MEMORY	SDIMM 512MB DDRII667 HYNIX HYMP564S64BP6-Y5	SODIMM 512M HYMP564S64BP6-Y5	KN.5120G.014
MEMORY	SDIMM 512MB DDRII667 SAMSUNG M470T6554CZ3-CE6	SODIMM 512M M470T6554CZ3-CE6	KN.5120B.018
MEMORY	SDIMM IGB DDRII667 NANYA NT1GT64U8HA0BN-3C	SODIMM 1G NT1GT64U8HA0BN-3C	KN.1GB03.009
MEMORY	SDIMM 1GB DDRII667 ELPIDA GU331G0AJEPN6E2C	SODIMM 1G GU331G0AJEPN6E2C	KN.1GB09.005
MISCELLANEOUS	LOGO PLATE	PLT LOGO PANEL	31.A30V1.001
MISCELLANEOUS	LCD SCREW RUBBER	RUBBER SCREW MYALL	47.TCBV1.001
MISCELLANEOUS	LCD SCREW RUBBER	RUB LCD RUBBER CUSHION BOLSENA	47.A46V1.002
SCREWS	SCREW	SCW HEX NYL I#R-40/O#4-40 L5.5	34.00015.081
SCREWS	SCREW	SCREW MACH WAFER M2*L4 NI	86.T39V1.002
SCREWS	SCREW	SCREW M2*L3 (WHITE)	86.00C07.220
SCREWS	SCREW	SCRW M2.5*6 ~ L-CASE + U- CASE	86.00D28.330
SCREWS	SCREW	SCRW M2*L3	86.00D29.620
SCREWS	SCREW	SCRW M2.5*8 NO-NYLOK	86.00D41.330
SCREWS	SCREW	SCRW M2.5*5 WAFER B-ZN ROHS	86.00D47.630
SCREWS	SCREW	SCREWM2*L3NYLOKCR3+	86.00E25.723
SCREWS	SCREW	SCREW M2*L3 NON-NYLOK CR3+	86.00E31.723
SCREWS	SCREW	SCREW M2.5*L6 NYLOK CR3+	86.00E33.736
SCREWS	SCREW	SCREW M2.5*L8 NYLOK CR3+	86.00E34.738
SCREWS	SCREW	SCRWM2.5*L3(NONNYLOK)	86.9A523.3R0
SCREWS	SCREW	SCREWM3x4(86.9A524.4R0)	86.9A524.4R0
SCREWS	SCREW	SCRW M2*4 WAFER NI	86.9A552.4R0
SCREWS	SCREW	SCREW NI M2*6L	86.9A552.6R0
SCREWS	SCREW	IMS M2X4(H=0.3)	86.00E13.524

Category	Part Name	Description	OEM Part No.
ACCESSORY	REMOTE CONTROL	REMOTE CTRL FORMOSA21 RC802	NEW PARTS
ADAPTER	ADAPTER 90W LITEON PA-1900- 04WR	ADT 90W LITEON PA-1900- 04WR	AP.09003.005
ADAPTER	ADAPTER 90W DELTA ADP-90SB BBAAF	ADT 90W DELTA ADP-90SB BBAAF	AP.09001.004
ADAPTER	ADAPTER 90W LISHIN SLS0202C19A54LF	ADT 90W LISHIN SLS0202C19A54LF	AP.09006.005
ADAPTER	ADAPTER 90W LISHIN SLS0202C19A20LF	ADT 90W LISHIN SLS0202C19A20LF	AP.09006.004
BATTERY	BATTERY PACK LI+ 8CELL 2.4MAH SANYO	BTY PACK LI+ 8C 2.4AH SANYO	BT.00803.018
BATTERY	BATTERY PACK LI+ 8CELL 2.4MAH SONY	BTY PACK LI+ 8C 2.4AH SONY	BT.00807.010
BAORDS	MODEM BOARD FOXCONN T60M845.01	MODEM MDC1.5 AGERE AZALIA G	54.TCZV1.001
BAORDS	VGA BOARD G73M 256M	KIRKINI VGA BD G73M/ 256M(D)	NEW PARTS
BAORDS	VGA BOARD G71M 512M	KIRKINI VGA BD G71M/ 512M(D)	NEW PARTS
BOARDS	BLUETOOTH BOARD FOXCONN BCM2045 V01	BT MODULE FOXCONN BCM2045 V01	54.TB2V1.001
BOARDS	WIRELESS LAN BOARD 802.11ABG INTEL 3945 MW2	WLAN 802.11ABG INTEL 3945 MW2	KI.GLN01.002
BOARDS	WIRELESS LAN BOARD 802.11ABG INTEL 3945 MW1	WLAN 802.11ABG INTEL 3945 MW1	KI.GLN01.001
BOARDS	WIRELESS LAN BOARD 802.11ABG INTEL 3945 RW	WLAN 802.11ABG INTEL 3945 RW	KI.GLN01.003
BOARDS	WIRELESS LAN BOARD 802.11BG INTEL INTEL 3945BG	WLAN PRO/WIRELESS 3945BG	KI.GLN01.005
BOARDS	USB BOARD	KIRKINI USB BD(D)	55.TC1V1.002
BOARDS	TOUCHPAD BOARD SYNPATICT M61PUF1G372	TOUCHPAD SYNPATICTM61PUF1G372	56.A46V1.001
BOARDS	LED BOARD	KIRKINI LED 06506-1 BD(D)	55.TC1V1.003
BOARDS	MEDIA BOARD	KIRKINI MEDIA BD 06501- 2(D)	NEW PARTS
BOARDS	TV TUNER BOARD	TV TUNER HYBRID MINI M115	NEW PARTS
CABLES	BLUETOOTH CABLE	C.A. BT CABLE KIRKINI	50.TC1V1.003
CABLES	USB CABLE	C.A. FFC USB KIRKINI	50.TC1V1.001
CABLES	LED BOARD CABLE	C.A. LED FFC KIRKINI	50.TC1V1.005
CABLES	TOUCHPAD CABLE	C.A. TP FFC KIRKINI	50.TC1V1.004
CABLES	MEDION BOARD CABLE	C.A. FFC MEDIA BOARD KIRKINI	NEW PARTS
CABLES	MODEM CABLE W/ RJ11 SOCKET	SKT JACK 6P CBL30202-0255 SMD	50.TC1V1.006
CABLES	AVERMEDIA CABLE	CABLE AVERMEDIA 064AAA34 IEC_S	NEW PARTS
CABLES	POWER CORD 2.5A 125V USA	CORD USA/W CNS 2.5A 125V 8121-	27.01518.781

Category	Part Name	Description	OEM Part No.
CABLES	POWER CORD 7A 250V 2PIN KOREAN	CODE 7A250V 2P 1830 KOREAN	27.01518.531
CABLES	POWER CORD 7A 125V 2PIN JAPEN	CODE JAPAN 7A 125V 2P BK	27.01518.551
CABLES	POWER CORD 2.5A 250V AUSTRALIA	CODE 2.5A 250V AUSTRALIA BK	27.01518.621
CABLES	POWER CORD 10A 125V 3PIN US BK	CODE 10A 125V 3P US BK	27.01518.641
CABLES	POWER CORD 10A 125V US	CODE US 10A 125V BK	27.T30V1.001
CABLES	POWER CORD 10A 250V 3PIN DENMARK BK	CODE 10A 250V 3P DENMARK BK	27.01518.671
CABLES	POWER CORD 10A 3PIN BK DENMARK	CODE DENMARK 10A 3P BK	27.01518.561
CABLES	POWER CORD 16A 250V SOUTH AFRICA BK	CODE 16A 250V SOUTH AFRICA BK	27.01518.681
CABLES	POWER CORD 10A 250V 3PIN BK SOUTH AFRICA	CODE SOUTH AFRICA 10A 250V BK	27.01518.571
CABLES	POWER CORD 10A 250V 3PIN SWISS BK	CODE 10A 250V 3P SWISS BK	27.01518.691
CABLES	POWER CORD 10A 250V SWISS	CODE SWISS POWER 10A 250V BK	27.01518.581
CABLES	POWER CORD 10A 250V 3PIN CHINA BK	CORD 10A 250V 3P CHINA BK	27.01518.701
CABLES	POWER CORD 10A 250V 3PIN CHINA	CORD CHINA 10A 250V 3P	27.01518.591
CABLES	POWER CORD 10A 250V 3PIN ITALY BK	CORD 10A 250V 3P ITALY BK	27.01518.711
CABLES	POWER CORD 10A 250V 3PIN ITALY	CORD ITALY 10A 250V 3P BK	27.01518.611
CABLES	POWER CORD 10A 250V SOUTH AFRICA BK (INDIA)	CORD 10A 250V SOUTH AFRICA BK	27.01518.721
CABLES	POWER CORD 2.5A 250V SOUTH AFRICA BK (INDIA)	CORD 2.5A 250V SOUTH AFRICA BK	27.01518.631
CABLES	POWER CORD 16A 250V 3PIN EUR BK	CORD 16A 250V 3P EUR BK	27.01518.731
CABLES	POWERCORD220V3PINEUR	CORD EUR 220V 3P BK	27.T30V1.004
CABLES	POWER CORD 5A 250V 3PIN UK BK	CODE 5A 250V 3P UK BK	27.03118.001
CABLES	POWERCORD3A250V3PINUK	CODE UK 3A 250V 3P BK	27.01518.541
CABLES	POWERCORDACA/ACNZ	POWER CODE ACA / ACNZ ANNIE	27.03218.021
CABLES	POWER CODE 7A 125V 2PIN JAPAN	CODE 7A 125V JAPAN 2PIN BK	27.03518.161
CASE/COVER/ BRACKET ASSEMBLY	USB BRACKET	ASSY USB IO BRK KIRKINI	33.TC1V1.001
CASE/COVER/ BRACKET ASSEMBLY	LED BRACKET	ASSY LED BRACKET	33.TC1V1.002
CASE/COVER/ BRACKET ASSEMBLY	TOUCHPAD BRACKET	ASSY TP FRAME KIRKINI	NEW PARTS

Category	Part Name	Description	OEM Part No.
CASE/COVER/ BRACKET	MIDDLE COVER	ASSY MIDDLE COVER AS KIRKINI	NEW PARTS
ASSEMBLY CASE/COVER/ BRACKET	HDD COVER	ASSY HDD COVER KIRKINI	NEW PARTS
ASSEMBLY			
CASE/COVER/ BRACKET ASSEMBLY	DIMM COVER	ASSY DIMM COVER KIRKINI	42.TC1V1.003
CASE/COVER/ BRACKET ASSEMBLY	UPPER CASER W/COVER SWITCH CABLE&MICROPHONE TV	ASSY UCASE AS TV KIRKINI	NEW PARTS
CABLES	COVER SWITCH CABLE	C.A. COVER SWITCH HT KIRKINI	50.TC1V1.002
MICROPHONE	MICROPHONE SHORT	MICROPHONE SUNMOWNG MYALL	23.TCBV1.002
MICROPHONE	MICROPHONE LONG	MICROPHONELONGKIRKINI	23.TC1V1.005
CASE/COVER/ BRACKET ASSEMBLY	LOWER CASE W/SPEAKER TV	ASSY LCASE TV KIRKINI	NEW PARTS
SPEAKER	SPEAKER WOOFER	SPEAKERWOOFERKIRKINI	23.TC1V1.004
SPEAKER	SPEAKER PACK LEFT/RIGHT	SPEAKER KIRKINI	23.TC1V1.003
COMBO MODULE	COMBO MODULE 24X GBASE	ASSY DVD GBASE COMBO	6M.TC1V1.001
CASE/COVER/ BRACKET ASSEMBLY	OPTICAL BRACKET	BRKTODDBRZCKETKIRKINI	33.TC1V1.003
CASE/COVER/ BRACKET ASSEMBLY	COMBO BEZEL	ASSY DVD GBASE COMBO KIRKINI	42.TC1V1.004
COMBO MODULE	CDRW/DVD COMBO DRIVE 24X PHILIPS SCB5265 W/O BEZEL	COMBO PHI/SCB5265 MYALL NOBZL	KO.02408.010
COMBO MODULE	CDRW/DVD COMBO DRIVE 24X PHILIPS SCB5265 W/O BEZEL	COMBO TSST/TS-L462C AC02 LF	KO.02404.007
COMMUNICATION MODULE	DIGITAL ANTENNA	ANTENNA DIGITAL PASSIVE	NEW PARTS
CPU/PROCESSOR	CPU DC YONAH T2500 2GMHZ INTEL	IC CPU DC YONA T2500 2G PGA	KC.25001.DTP
CPU/PROCESSOR	CPU DC YONAH T2300E 1.66GMHZ INTEL	IC CPU DC YONAH T2300E 1.66G	KC.23E01.DTP
CPU/PROCESSOR	CPU DC YONAH T2300 1.66GMHZ INTEL	IC CPU DC YONA T2300 1.66G PGA	KC.23001.DTP
CPU/PROCESSOR	CPU DC YONAH T2400 1.83G INTEL	IC CPU DC YONA T2400 1.83G PGA	KC.24001.DTP
CPU/PROCESSOR	"CPU DC YONAH T2600 2,16GMHZ INTEL"	IC CPU DC YONA T2600 2.16G PGA	KC.26001.DTP
CPU/PROCESSOR	CPU SC YONAH T1300 1.66GMHZ INTEL	IC CPU SC YONA T1300 1.66G PGA	KC.13001.STP
CPU/PROCESSOR	CPU YONAH 1.73GMHZ 533 INTEL	IC CPU YONAH 1.73G/533 T2250	KC.22501.DTP
CPU/PROCESSOR	CPU YONAH 1.60GMHZ 533 INTEL	IC CPU YONAH 1.60G/533 T2050	KC.20501.DTP
CPU/PROCESSOR	CPU YONAH 1.86GMHZ 533 INTEL	IC CPU YONAH 1.86G/533 T1350	KC.13501.STP

Category	Part Name	Description	OEM Part No.
DVD-RW DRIVE	DVD-RW MODULE 8X SUPER	ASSY DVD GBASE	NEW PARTS
	MULTI GBASE	SUPERMULTI	
CASE/COVER/ BRACKET ASSEMBLY	OPTICAL BRACKET	BRKTODDBRZCKETKIRKINI	33.TC1V1.003
CASE/COVER/ BRACKET ASSEMBLY	DVD-RW SUPER MULTI BEZEL	ASSY DVD GBASE SMULTI KIRKINI	NEW PARTS
DVD-RW DRIVE	DVD-RW DRIVE 8X SUPER MULTI PHILIPS SDVD-8821 W/O BEZEL	SUP-MULT PHI/SDVD-8821 KERKINI	KU.00809.005
DVD-RW DRIVE	DVD-RW DRIVE 8X SUPER MULTI TOSHIBA TS-L632D W/O BEZEL	S-MULT 8X TST/TS-L632D W/ O BZL	KU.00801.014
DVD-RW DRIVE	DVD-RW MODULE 8X SLOT IN	ASSY SLOTIN KME KIRKINI	NEW PARTS
CASE/COVER/ BRACKET ASSEMBLY	OPTICAL BRACKET	BRKTODDBRZCKETKIRKINI	33.TC1V1.003
CASE/COVER/ BRACKET ASSEMBLY	DVD-RW SUPER MULTI BEZEL	ASSY SLOTIN KME KIRKINI	NEW PARTS
DVD-RW DRIVE	DVD-RW 8X SLOT IN PANASONIC UJ-845 SLOT IN	SUP-MULT PAN/UJ-845 SLOT LF AG	KU.00809.005
FAN	FAN BIG	FAN MAIN KIRKINI LONG WIRE SUN	23.TC1V1.001
FAN	FAN BIG	FAN MAIN KIRKINI LONG WIRE FOR	23.TC1V1.001
FAN	FAN 2ND SMALL	FAN 2ND KIRKINI SUNON	23.TC1V1.002
HDD/HARD DISK DRIVE	"HDD MODULE 80G 2.5"" 5400RPM SATA"	"HDD MODULE 80G 2.5"" 5400R SATA"	
CASE/COVER/ BRACKET ASSEMBLY	HDD BRACKET	ASSYHDDBRACKETKIRKINI	33.TC1V1.004
HDD/HARD DISK DRIVE	HDD 80G 5400RPM SATA SEAGATE ST98823AS LF	HDD SATA 80GB SEAGATE ST98823A	KH.08001.023
HDD/HARD DISK DRIVE	HDD 80G 5400RPM SATA TOSHIBA ARES-B_S MK8032GSX F/W AS111G	HDD 80GB SATA TOSHIBA 5400RPM	KH.08004.005
HDD/HARD DISK DRIVE	"HDD 80G 5400RPM SATA HITACHI 2.5IN.1.5G NCQ MORAGA+HTS541080G9SA00,C6 0D"	HDD 80GB HGST 0A26924 ROHS	KH.08007.015
HDD/HARD DISK DRIVE	HDD 80G 5400RPM SATA WD WD800BEVS-22LAT0 ML60 LF FW:T0	HDD 80GB WD800BEVS- 22LAT0	KH.08008.031
HDD/HARD DISK DRIVE	"HDD MODULE 100G 2.5"" 5400RPM SATA"	ASSY 2ND HDD KIRKINI	
CASE/COVER/ BRACKET ASSEMBLY	HDD BRACKET 2ND	ASSY 2ND HDD KIRKINI	33.TC1V1.005
HDD/HARD DISK DRIVE	HDD 100G 5400RPM HITACHI SATA 1.5G NCQ MORAGA+HTS541010G9SA00 FW:S60D	HDD 100GB HGST 0A26930 ROHS	KH.10007.005
HDD/HARD DISK DRIVE	HDD 100G 5400RPM SATA TOSHIBA ARES-B_S MK1032GSX F/W AS021G	HDD 100GB SATA TOSHIBA 5400RPM	KH.10004.003

Category	Part Name	Description	OEM Part No.
HDD/HARD DISK DRIVE	HDD 100G 5400RPM SATA SEAGATE ST9100824AS ROHS	HDD 100G SATA ST9100824AS ROHS	KH.10001.008
HDD/HARD DISK DRIVE	HDD 100G 5400RPM SATA WD1000BEVS-22LAT0 ML60 LF FW:T0	HDD 100GB WD1000BEVS- 22LAT0	KH.10008.002
HDD/HARD DISK DRIVE	"HDD MODULE 100G 2.5"" 7200RPM SATA"	"HDD MODULE 100G 2.5"" 7200 SATA"	
CASE/COVER/ BRACKET ASSEMBLY	HDD BRACKET	ASSYHDDBRACKETKIRKINI	33.TC1V1.004
HDD/HARD DISK DRIVE	HDD 100G 7200RPM SATA HTS721010G9SA00	HDD 100GB HGST HTS721010G9SA00	KH.10007.007
HDD/HARD DISK DRIVE	"HDD MODULE 120G 2.5"" 5400RPM SATA"	HDD MODULE 120G 2.5 5400R SATA	
CASE/COVER/ BRACKET ASSEMBLY	HDD BRACKET	ASSYHDDBRACKETKIRKINI	33.TC1V1.004
HDD/HARD DISK DRIVE	HDD 120G 5400RPM TOSHIBA SATAI 1.5G W/NCQ MK1234GSX LF TAURUS FW:AH001A	HDD 120GB SATA TOSHI	KH.12004.003
HDD/HARD DISK DRIVE	HDD 120G 5400RPM SATA SEAGATE ST9120821AS LF MERCURY 2 FW:3.06	HDD 120GB SEAGATE ST9120821AS	KH.12001.025
HDD/HARD DISK DRIVE	HDD 120G 5400RPM SATA SAMSUNG HM120JI M60S LF FW: YF100-10	HDD 120GB SATA SAMSUNG 5400RPM	KH.1200B.002
HDD/HARD DISK DRIVE	HDD 120G 5400RPM SATA WD WD1200BEVS-22LAT0 ML60 LF FW:T0	HDD 120GB WD1200BEVS- 22LAT0	KH.12008.016
HDD/HARD DISK DRIVE	"HDD MODULE 160G 2.5"" 5400RPM SATA"	HDD MODULE 160G 2.5 5400R SATA	
CASE/COVER/ BRACKET ASSEMBLY	HDD BRACKET	ASSYHDDBRACKETKIRKINI	33.TC1V1.004
HDD/HARD DISK DRIVE	HDD 60G 5400RPM SATA SEAGATE ST9160821AS	HDD 160GB SEAGATE ST9160821AS	KH.16001.021
HEATSINK	CPU HEATSINK W/O FAN	ASSY CPU HEAT SINK ROBIN KIRKI	34.TC1V1.001
HEATSINK	VGA HEATSINK	ASSY VGA HEAT SINK ROBIN KIRKI	34.TC1V1.002
KEYBOARD	KB 105KEY DARFON NSK-AFB1D US-INTERNATIONAL	KB DARFON NSK-AFB1D US- INT105K	KB.ABY07.001
KEYBOARD	KB 105KEY DARFON NSK-AFB02 CHINES	KB DARFON NSK-AFB02 CHINES105K	KB.ABY07.002
KEYBOARD	KB 106KEY DARFON NSK-AFB0S SPANISH	KB DARFON NSK-AFB0S SPANISH106	KB.ABY07.003
KEYBOARD	KB 105KEY DARFON NSK-AFB03 THAI	KB DARFON NSK-AFB03 THAI 105K	KB.ABY07.004
KEYBOARD	KB 106KEY DARFON NSK-AFB1B BRAZILI	KB DARFON NSK-AFB1B BRAZILI106	KB.ABY07.005
KEYBOARD	KB 105KEY DARFON NSK-AFB0K KOREAN	KB DARFON NSK-AFB0K KOREAN 105	KB.ABY07.006
KEYBOARD	KB 106KEY DARFON NSK-AFB0U UK	KB DARFON NSK-AFB0U UK 106KEYS	KB.ABY07.007

Category	Part Name	Description	OEM Part No.
KEYBOARD	KB 106KEY DARFON NSK-AFB0G GERMAN	KB DARFON NSK-AFB0G GERMAN 106	KB.ABY07.008
KEYBOARD	KB 106KEY DARFON NSK-AFB0E ITALIAN	KB DARFON NSK-AFB0E ITALIAN106	KB.ABY07.009
KEYBOARD	KB 106KEY DARFON NSK-AFB0F FERENCH	KB DARFON NSK-AFB0F FERENCH106	KB.ABY07.010
KEYBOARD	KB 106KEY DARFON NSK-AFB00 SWISS	KB DARFON NSK-AFB00 SWISS 106K	KB.ABY07.011
KEYBOARD	KB 106KEY DARFON NSK-AFB06 PORTUGU	KB DARFON NSK-AFB06 PORTUGU106	KB.ABY07.012
KEYBOARD	KB 105KEY DARFON NSK-AFB0A ARABIC	KB DARFON NSK-AFB0A ARABIC 105	KB.ABY07.013
KEYBOARD	KB 106KEY DARFON NSK-AFB1A BELGIAN	KB DARFON NSK-AFB1A BELGIAN106	KB.ABY07.014
KEYBOARD	KB 106KEY ARFON NSK-AFB0W SWEDISH	KB DARFON NSK-AFB0W SWEDISH106	KB.ABY07.015
KEYBOARD	KB 106KEY DARFON NSK-AFB0C CZECH	KB DARFON NSK-AFB0C CZECH 106K	KB.ABY07.016
KEYBOARD	KB 106KEY DARFON NSK-AFB0Q HUNGAR	KB DARFON NSK-AFB0Q HUNGAR106	KB.ABY07.017
KEYBOARD	KB 106KEY DARFON NSK-AFB0N NORWEGI	KB DARFON NSK-AFB0N NORWEGI106	KB.ABY07.018
KEYBOARD	KB 106KEY DARFON NSK-AFB0D DANISH	KB DARFON NSK-AFB0D DANISH106K	KB.ABY07.019
KEYBOARD	KB 106KEY DARFON NSK-AFB0T TURKISH	KB DARFON NSK-AFB0T TURKISH106	KB.ABY07.020
KEYBOARD	KB 106KEY DARFON NSK-AFB0M CAN FRENCH	KB DARFON NSK-AFB0M CAN FR106K	KB.ABY07.022
KEYBOARD	KB 105KEY DARFON NSK-AFB0L GREEK	KB DARFON NSK-AFB0L GREEK105K	KB.ABY07.024
KEYBOARD	KB 105KEY DARFON NSK-AFB0H HEBREW	KB DARFON NSK-AFB0H HEBREW105	KB.ABY07.025
KEYBOARD	KB 105KEY DARFON NSK-AFB0R RUSSIAN	KB DARFON NSK-AFB0R RUSSIAN105	KB.ABY07.026
KEYBOARD	KB 106KEY DARFON NSK-AFB1F SLOVEN	KB DARFON NSK-AFB1F SLOVEN106	KB.ABY07.027
LCD	"LCD MODULE 17.1"" WXGA+ NONE GLARE W/CCD"	ASSY LCD SL W/FIBER KIRKINI	NEW PARTS
BOARDS	INVERTER BOARD DARFON VK.21189.402	INVERTER 17" VK.21189.402	19.TCBV1.001
CABLES	"LCD CABLE 17"""	"C.A. 17"" SL KIRKINI "	50.TC1V1.007
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET LEFT	BRKT-R LCD KIRKINI	33.TC1V1.006
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET RIGHT	BRKT-L LCD KIRKINI	33.TC1V1.007
CASE/COVER/ BRACKET ASSEMBLY	CAMERA HOLDER	HLDR CAMERA SIDE RIM KIRKINI	42.ADFV1.001
CASE/COVER/ BRACKET ASSEMBLY	CAMERA UPPER CASE	CAS CAMERA L-CASE KIRKINI	60.ADFV1.007

Category	Part Name	Description	OEM Part No.
CASE/COVER/ BRACKET ASSEMBLY	CAMERA HOLDER CAP	HLDRCAMERACAPKIRKINI	42.ADFV1.002
CASE/COVER/ BRACKET ASSEMBLY	CAMERA LATCH	LATCH CAMERA HINGH KIRKINI	33.ADFV1.003
CASE/COVER/ BRACKET ASSEMBLY	CAMERA LOWER CASE	ASSY CAMERA LCASE KIRKINI	60.ADFV1.006
CASE/COVER/ BRACKET ASSEMBLY	"LCD PANEL 17"" W/HINGE"	"ASSY LCD 17.1"" PP-DL KIRKINI "	NEW PARTS
CASE/COVER/ BRACKET ASSEMBLY	HINGE PACK LEFT/RIGHT	HINGE PACK LEFT/RIGHT	6K.TC1V1.001
CASE/COVER/ BRACKET ASSEMBLY	"LCD BEZEL 17.1"" W/LOGO"	ASSY LCD BEZEL KIRKINI	60.ADFV1.004
CASE/COVER/ BRACKET ASSEMBLY	CCD CAMERA 1.3M LOGITECH 961458-2000 L	CAMERA CMOS 1.3M 961458- 2000 L	56.ABAV1.001
COMMUNICATION MODULE	WIRELESS ANTENNA	ANTENNA CABLE MYALL2	25.ADFV1.001
LCD	"LCD 17.1"" WXGA+ AUO B170PW03 V3 NONE GLARE"	"LCD17""WAUB170PW03V3	LK.17105.006
LCD	"LCD 17.1"" WXGA+ QDI QD17TL02-05 NONE GLARE"	"LCD 17""W QDI QD17TL02- 05"	LK.17109.001
LCD	"LCD MODULE 17.1"" WXGA GLARE G1"	ASSY LCD SL W/FIB KIRKINI LPL	NEW PARTS
BOARDS	INVERTER BOARD DARFON VK.21189.402	INVERTER 17"VK.21189.402	19.TCBV1.001
CABLES	"LCD CABLE 17"" WXGA"	"C.A. 17"" SL KIRKINI "	50.TC1V1.007
CAMERA	CAMERA CMOS 1.3M LOGITECH 961458-2000 L	CAMERA CMOS 1.3M 961458- 2000 L	56.ABAV1.001
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET LEFT	BRKT-R LCD KIRKINI	33.TC1V1.006
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET RIGHT	BRKT-L LCD KIRKINI	33.TC1V1.007
CASE/COVER/ BRACKET ASSEMBLY	CAMERA HOLDER	HLDR CAMERA SIDE RIM KIRKINI	42.ADFV1.001
CASE/COVER/ BRACKET ASSEMBLY	CAMERA UPPER CASE	CAS CAMERA L-CASE KIRKINI	60.ADFV1.007
CASE/COVER/ BRACKET ASSEMBLY	CAMERA HOLDER CAP	HLDRCAMERACAPKIRKINI	42.ADFV1.002
CASE/COVER/ BRACKET ASSEMBLY	CAMERA LATCH	LATCH CAMERA HINGH KIRKINI	33.ADFV1.003
CASE/COVER/ BRACKET ASSEMBLY	CAMERA LOWER CASE	ASSY CAMERA LCASE KIRKINI	60.ADFV1.006

Category	Part Name	Description	OEM Part No.
CASE/COVER/ BRACKET ASSEMBLY	"LCD PANEL 17"" W/HINGE"	"ASSY LCD 17.1"" PP-DL KIRKINI "	NEW PARTS
CASE/COVER/ BRACKET ASSEMBLY	HINGE PACK LEFT/RIGHT	HINGE PACK LEFT/RIGHT	6K.TC1V1.001
CASE/COVER/ BRACKET ASSEMBLY	"LCD BEZEL 17.1"" "	ASSYLCDBEZELUVKIRKINI	NEW PARTS
COMMUNICATION MODULE	WIRELESS ANTENNA	ANTENNA CABLE MYALL2	25.ADFV1.001
LCD	"LCD 17.1"" WXGA LG LP171WP4- TL02 GLARE "	"LCD 17""W LP171WP4-TL02 GLARE "	LK.17008.015
LCD	"LCD 17.1"" WXGA QDI QD17TL02- 06 GLARE "	"LCD 17"" QD17TL02-06 GLARE"	LK.17109.002
LCD	"LCD 17.1"" WXGA LG LP171WP4- TL03 GLARE "	"LCD 17"" WXGA+ LP171WP4-TL03"	LK.17008.020
LCD	"LCD MODULE 17.1"" WXGA GLARE G2 "	ASSY WXGA17.1 P-DL KIRKINI CMO	NEW PARTS
BOARDS	INVERTER BOARD FOXCONN T62I247.00	"INVETER 17"" T62I247.00	NEW PARTS
CABLES	"LCD CABLE 17"" WXGA"	"C.A. 17.1""WXGADLKIRKINI	NEW PARTS
CAMERA	CAMERA CMOS 1.3M LOGITECH 961458-2000 L	CAMERA CMOS 1.3M 961458- 2001 L	56.ABAV1.001
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET LEFT	BRKT-R LCD KIRKINI	33.TC1V1.006
CASE/COVER/ BRACKET ASSEMBLY	LCD BRACKET RIGHT	BRKT-L LCD KIRKINI	33.TC1V1.007
CASE/COVER/ BRACKET ASSEMBLY	CAMERA HOLDER	HLDR CAMERA SIDE RIM KIRKINI	42.ADFV1.001
CASE/COVER/ BRACKET ASSEMBLY	CAMERA UPPER CASE	CAS CAMERA L-CASE KIRKINI	60.ADFV1.007
CASE/COVER/ BRACKET ASSEMBLY	CAMERA HOLDER CAP	HLDR CAMERA CAP KIRKINI	42.ADFV1.002
CASE/COVER/ BRACKET ASSEMBLY	CAMERA LATCH	LATCH CAMERA HINGH KIRKINI	33.ADFV1.003
CASE/COVER/ BRACKET ASSEMBLY	CAMERA LOWER CASE	ASSY CAMERA LCASE KIRKINI	60.ADFV1.006
CASE/COVER/ BRACKET ASSEMBLY	"LCD PANEL 17"" W/HINGE"	"ASSY LCD 17.1"" PP-DL KIRKINI "	NEW PARTS
CASE/COVER/ BRACKET ASSEMBLY	HINGE PACK LEFT/RIGHT	HINGE PACK LEFT/RIGHT	6K.TC1V1.001
CASE/COVER/ BRACKET ASSEMBLY	"LCD BEZEL 17.1"" "	ASSYLCDBEZELUVKIRKINI	NEW PARTS

Category	Part Name	Description	OEM Part No.
COMMUNICATION MODULE	WIRELESS ANTENNA	ANTENNA CABLE MYALL2	25.ADFV1.001
LCD	"LCD 17.1"" WXGA N170C1-L02 GLARE G2 "	"LCD 17.0""W N170C1-L02 GLARE "	LK.1700D.004
LCD	"LCD 17.1"" WXGA AUO B170PW04 GLARE G2 "	LCD 17.1WXGA+ AUO B170PW04 V0	LK.17105.004
MAINBOARD	MAINBOARD KIRKINI G73 256M TV W/RTC BATTERY&TV BOARD&TV BOARD CABLE	KIRKINI MB/G73 AS W/TV 05248-2	NEW PARTS
BATTERY	RTC BATTERY	BTYRTCMITSUBISHIROHS	23.TCBV1.003
BOARDS	TV/RF IN BOARD	KIRKINI TV/RF IN BD(D)	NEW PARTS
CABLES	TV CABLE	C.A. TV CABLE KIRKINI	NEW PARTS
MEMORY	SDIMM 512M DDRII533 HYNIX HYMP564S64BP6-C4	SODIMM 512M HYMP564S64BP6-C4	KN.5120G.013
MEMORY	SDIMM 512M DDRII533 NANYA NT512T64UH8A1FN-37B	SODIMM512M NT512T64UH8A1FN-37B	KN.51203.023
MEMORY	SDIMM 512M DDRII533 SAMSUNG M470T6554CZ3-CD5	SODIMM 512M M470T6554CZ3-CD5	KN.5120B.015
MEMORY	SDIMM 256M DDRII533 NANYA NT256T64UH4A1FN-37B	DIMM 256M NT256T64UH4A1FN-37B	KN.25603.029
MEMORY	SDIMM 256M DDRII533 HYNIX HYMP532S64BP6-C4	SODIMM 256M HYMP532S64BP6-C4	KN.2560G.012
MEMORY	SDIMM 1GB DDRII533 NANYA NT1GT64U8HA0BN-37B	SODIMM 1G NT1GT64U8HA0BN-37B	KN.1GB03.006
MEMORY	SDIMM 256MB DDRII667 NANYA NT256T64UH4A1FN-3C	SODIMM 256M NT256T64UH4A1FN-3C	KN.25603.027
MEMORY	SDIMM 256MB DDRII667 HYNIX HYMP532S64BP6-Y5	SODIMM 256M HYMP532S64BP6-Y5	KN.2560G.013
MEMORY	SDIMM 512MB DDRII667 NANYA NT512T64UH8A1FN-3C	SODIMM 512M NT512T64UH8A1FN-3C	KN.51203.025
MEMORY	SDIMM 512MB DDRII667 HYNIX HYMP564S64BP6-Y5	SODIMM 512M HYMP564S64BP6-Y5	KN.5120G.014
MEMORY	SDIMM 512MB DDRII667 SAMSUNG M470T6554CZ3-CE6	SODIMM 512M M470T6554CZ3-CE6	KN.5120B.018
MEMORY	SDIMM IGB DDRII667 NANYA NT1GT64U8HA0BN-3C	SODIMM 1G NT1GT64U8HA0BN-3C	KN.1GB03.009
MEMORY	SDIMM 1GB DDRII667 ELPIDA GU331G0AJEPN6E2C	SODIMM 1G GU331G0AJEPN6E2C	KN.1GB09.005
MISCELLANEOUS	LOGO PLATE	PLT LOGO PANEL	31.A30V1.001
MISCELLANEOUS	LCD SCREW RUBBER	RUBBER SCREW MYALL	47.TCBV1.001
MISCELLANEOUS	LCD SCREW RUBBER	RUB LCD RUBBER CUSHION BOLSENA	47.A46V1.002
SCREWS	SCREW	SCW HEX NYL I#R-40/O#4-40 L5.5	34.00015.081
SCREWS	SCREW	SCREW MACH WAFER M2*L4 NI	86.T39V1.002
SCREWS	SCREW	SCREW M2*L3 (WHITE)	86.00C07.220
SCREWS	SCREW	SCRW M2.5*6 ~ L-CASE + U- CASE	86.00D28.330
SCREWS	SCREW	SCRW M2*L3	86.00D29.620
SCREWS	SCREW	SCRW M2.5*8 NO-NYLOK	86.00D41.330

Category	Part Name	Description	OEM Part No.
SCREWS	SCREW	SCRW M2.5*5 WAFER B-ZN ROHS	86.00D47.630
SCREWS	SCREW	SCREWM2*L3NYLOKCR3+	86.00E25.723
SCREWS	SCREW	SCREW M2*L3 NON-NYLOK CR3+	86.00E31.723
SCREWS	SCREW	SCREW M2.5*L6 NYLOK CR3+	86.00E33.736
SCREWS	SCREW	SCREW M2.5*L8 NYLOK CR3+	86.00E34.738
SCREWS	SCREW	SCRWM2.5*L3(NONNYLOK)	86.9A523.3R0
SCREWS	SCREW	SCREWM3x4(86.9A524.4R0)	86.9A524.4R0
SCREWS	SCREW	SCRW M2*4 WAFER NI	86.9A552.4R0
SCREWS	SCREW	SCREW NI M2*6L	86.9A552.6R0
SCREWS	SCREW	IMS M2X4(H=0.3)	86.00E13.524
SCREWS	SCREW	SCRW M2L10 CONNHDD NYLOK	NEW PARTS